

Knowledge a Young Man
Should Have

SEX KNOWLEDGE SERIES

Knowledge a Young Man Should Have

BY

A. A. PHILIP, M.B., C.M.,

Late Medical Officer of Public Health
Northern Divisions, Scotland,

AND

H. R. MURRAY

LONDON:

"HEALTH AND STRENGTH"
18 BURLINGTON STREET, STRAND

EDINBURGH J. C. THOMSON
AT THE MERCAT PRESS

Who would be a man must be a non-conformist. He who would gather immortal palms must not be hindered by the name of goodness, but must explore if it be goodness. Nothing is at last sacred but the integrity of your own mind.

— EMERSON.

CONTENTS

	PAGE
CHAPTER I.—The Young Man of the Present and the Past—A Sweeping Indictment—A Defence of the Modern Young Man—His Physical Superiority—The Purpose of this Book	9
CHAPTER II.—The Sowing of Wild Oats—A Little Sermon—The Use and Abuse of Alcohol—My Lady Nicotine—Why Smoking Prevents Growth in the Young—Smoke Slowly—Pipe v. Cigarette—The Goddess of Chance—Does it Pay to Back Horses?	21
CHAPTER III. — Immorality Due to Ignorance—A Popular but Erroneous Belief—Growth and Reproduction—The Effects of Physical Exercise—The Penalty of Reproduction—Continence Versus Marriage	41
CHAPTER IV.—Popular Ignorance Concerning Venereal Diseases—What is Gonorrhoea?—General Symptoms of the Disease—The Chronic Stage of the Disease—Gonorrhoeal Infection in the Married State—Appalling Prevalence of the Disease	53
CHAPTER V.—Other Venereal Diseases—Syphilis—Dreadful Contagiousness	

	PAGE
of the Disease—Syphilis in Relation to Marriage—Some Peculiarities of the Disease—A Reminder for Those About to Marry	65
CHAPTER VI.—The Pursuit of Happiness—The Acquirement of Health—A Parallel—The First Step to Health—A Few Words About Food—Vegetarianism—Exercise Physiologically Considered—Physical Exercise ...	81
CHAPTER VII.—Recreation—Recreation is Essentially Change—Dancing—The Theatre and Music-Hall—Religion and Art—Athletic Sports ...	99
CHAPTER VIII.—Falling in Love—Is Love a Disease?—Love and Sexual Passion—The Marriageable Age—A Prenuptial Health Certificate—Impediments to Marriage—Epilepsy—Consumption—General Recommendations—Marriage Between Blood Relations	109
CHAPTER IX.—A Common and Dangerous Complaint—Forms of Hernia—What to do in Emergency—Why Man is More Subject to Hernia than Animals—Conclusion	133
APPENDIX.—By the Editor of <i>Health and Strength</i>	145
The Dishonour of Manhood, by Rev F. B. Meyer, B.A.	146
Lord Kinnaird's Message to Young Men	155

CHAPTER I

THE YOUNG MAN OF THE PRESENT AND THE PAST—A SWEEPING IN- DICTMENT—A DEFENCE OF THE MODERN YOUNG MAN—HIS PHYSI- CAL SUPERIORITY—THE PURPOSE OF THIS BOOK

THE Modern Young Man, smarting from the wounds inflicted by the poisoned darts aimed at him from every quarter by pessimistic sociologists and others, may take comfort in the reflection that the present age is not unique or even exceptional in the respect that the majority of its writers affect to discover in the Young Man a degeneracy of manners, morals and physique threatening to retard the progress of the race, and compare him unfavourably with the Young Man of the past, for whom it is generally claimed that he did those (good) things which the present Young Man leaves undone, and left undone those (evil) things which his successor takes a delight in doing.

A SWEEPING INDICTMENT

At a recent Y.M.C.A. conference the Young Man of the Present Day was dis-

cussed, and some most unkindly remarks were passed concerning him. It was alleged that he of the present generation is indolent, unenterprising, lacking in intelligence, too fond of pleasure and immoral.

Such a sweeping indictment prompted more than one periodical to institute inquiry into the state of the Modern Young Man, the result being that the charges made at the conference were pretty generally supported; journalistic enterprise unearthing employers who, in letters to the Editor, gave their opinion that not only was the indictment just in every particular, but that never in the history of the world had there been such a bad young person as the Modern Young Man; that even the Young Man of twenty and thirty years ago was more industrious, resourceful, ambitious and generally desirable; that the present benighted being is wont to give more consideration to the pattern on his socks than to his prospects of success, to think more of leisure than of ledgers, to study the lines and curves of the female figure rather than the symbols of cash and commerce, to shun the evening class and gather round the evening glass, whose one desire is to 'get out' of the office as often as possible and to scorn all notion of 'getting on' in it.

Let us deal with the charges in detail, and see if there be something which can be urged, if not in defence, then, at least, in excuse of the accused. We will take, first of all, the assertion that the Modern

Young Man is unenterprising. Complaint is made—which complaint, by the way, is based partly on inconsideration of the difference between past and present conditions, and partly on pure imagination—that the Modern Young Man, instead of setting to work to acquire an all-round knowledge of his business, as did the young man of former generations, is satisfied with becoming efficient in one department only, troubling himself not one whit concerning the details of other departments.

‘This is deplorable,’ writes an investigator into the causes of the alleged decadence of the Modern Young Man; ‘this is not the spirit which made England what she is! The spirit which accomplished that miracle was quite different—it was the spirit which made the clerk delight in his deskly duties, acquire an all-round knowledge of his business, become confidential clerk, junior partner in the firm, and ultimately head thereof. Who ever hears of a junior clerk reaching that pinnacle nowadays?’

A DEFENCE OF THE MODERN YOUNG MAN

To the query concluding the above we may all answer: *Plenty of us!* We are constantly hearing of men rising from humble positions to the control of large and important businesses. Of course, it may be argued by those who would sacri-

fice all reason to their infatuation for every age but the present, that the men who have thus prospered belong to a past generation. Quite true; but there are plenty of young men who are now rising steadily to the top of the tree, but of whom we shall not hear until they have reached that eminence, and whose example will doubtless be brought forward by future pessimists wherewith to reproach the young man who will be so unfortunate as to exist in the days to come.

A little consideration will show that it is very unjust to blame the Young Man of to-day with specialising in one branch only of his business. This is the Age of the Specialist. Modern life is too complex for us to put much trust in the all-round man; we label such a one at once as a Jack-of-all-trades, giving him credit for competence in none. In every grade of life, from the most learned profession to the humblest trade, our need is for the specialist; and the modern employer is in like case as the rest of us: he will have nothing to do with the man who would profess acquaintance with several branches of his trade; he requires only the man who can do one thing well, and he takes care to select him, and to keep him at that one thing.

While the modern employer is making use of the columns of the Press to publish his grievance that his employes show so little initiative and enterprise in business, he would be doubly aggrieved did one of his shorthand clerks or typists take him at his

word and begin to meddle with the work allotted to the invoice or ledger clerks.

In response to the charge of indolence we may well ask what means there is of discovery that the proportion of lazy men is larger to-day than at any time in the world's history? The hireling of the past worked longer hours for his master, not because he was more energetic than the hireling of the present, but because he lived in less enlightened times, and was without the needful legislation to protect him from the greed of his employer. Neither can we compare the amount of work accomplished, because such things as Official Trade Returns, which might serve us as some sort of guide, did not exist in bygone times. What figures we have, however, we will quote. In 1821, when the population of the United Kingdom was about 21 millions, the total trade amounted to about 70 millions of pounds; in 1909, the population having more than doubled itself, exceeding 45 millions, total trade returns showed a value of over 922 millions, which is more than thirteen times the former amount—which argues rather in favour of the industry of the modern business man than against it.

It must not be forgotten, moreover, that the Modern Employer, conscious that a mere rumour that he has a vacancy in his office will bring dozens of eager applicants to fill the same, no longer regards his clerk as a man who happens to be a clerk, but as a clerk who happens to be a man at a

wage of from 30s to £2 per week, and considers whether he might not curtail expenses by employing a clerk who happens to be a girl at a wage of from 10s to 15s per week. The Young Man Clerk of the past held his place only against another man who must be hired at the same price as himself; whereas his present representative has to hold his against the intrusion of a young girl who is willing to work at half the wage which will keep him, and who is already driving him from all the easier berths into the more strenuous.

With the accusation of indolence goes that of love of pleasure. Upon the head of the Modern Young Man is visited the reproach that he is too fond of the public-house, the music-hall and the picture palace, and that as a seeker after pleasure he is more eager than was his predecessor. With regard to the two latter institutions, they certainly did not exist to tempt the Young Man of bygone generations from the strict path of duty; but their place was held by the popular and far more demoralising cock-and-dog-pits which, according to all account, never suffered from lack of enthusiastic patronage.

In answer to the charge of insobriety we may quote some very interesting observations made by Mr R. W. Branthwaite, the Home Office Inspector under the Inebriates Acts: 'More than 100 years ago the frequency and spread of habitual drunkenness excited anxious comment, and gave rise to efforts of various kinds

directed towards its reduction. These efforts mainly consisted in the formation of societies for the propagation of temperance or total abstinence; the hope being that, as the number of temperate or totally abstaining persons increased, the number of habitual drunkards would proportionately decrease. The large and influential temperance societies of the present day are the outcome of these early efforts, and their work, during the century that has passed, has undoubtedly resulted in national advantage.

‘Those of us who have occasion to mix with the workers of to-day in busy centres cannot fail to observe *the improvement in the general drinking habits of the nation*, as evidenced by the substitution of unlicensed eating houses for licensed ones, and by the frequent absence of intoxicating liquor from tables in licensed restaurants and clubs. *Drunkenness in private life is now anathema*, and the man who cannot control himself becomes more or less an outcast from good society. ‘Treating’ as an adjunct to commercial transactions, is less prevalent than it used to be, and many minor inducements to excessive drinking have fallen into disrepute.’

A perusal of the whole report—too long for quotation here—must be extremely discomforting to those enthusiasts of ‘every century but this,’ especially such remarks as the following: ‘In the old days the dividing line between wilful excess and habitual drunkenness was masked by the

prevalence of the former; it is now more clearly defined by a marked diminution in wilful drunkenness, and the consequent separation of the population into those who are strictly moderate drinkers, or teetotalers on the one hand, and those who are habitually drunken on the other. The large majority of the population are now moderate drinkers who never get drunk, or teetotalers.'

Turning to the last, and most serious, count upon the indictment: that of greater immorality, we must say that there is nothing by which the charge can be either proved or disproved. So far as statistics can help us, it must be conceded that there has been of late years a deplorable increase in prostitution; but, on the other hand, there has also been a marked decrease in the number of illegitimate births—we are referring only to the United Kingdom. But neither the one nor the other facts can be taken as any index of morality; for it is often the case that where there is a comparative absence of prostitution, as in certain agricultural districts, there is a greater number of illegitimate children born.

PHYSICAL SUPERIORITY OF THE PRESENT GENERATION

But the most absurd of all charges brought against the Young Man of to-day, and, notwithstanding the absurdity of it, one which we may hear repeated again

and again, is that he is a weak, invertebrate, namby-pamby sort of creature, with none of the manliness, endurance or courage possessed by the Young Man of the Past. And the slur is cast despite the well-advertised fact that never since the passing of the ancient Greeks has so much attention been paid to the advancement of health and strength by means of physical culture as at present. Our ancestors can hardly be said to have known the meaning of the term. They took exercise only when on work or pleasure bent: they would never have dreamed of indulging in regular exercise simply and solely for health's sake: they knew nothing of the Gospel of Health as Science has preached it to us, with the satisfactory result that there are very few young men nowadays who do not practise some kind of physical culture, recognising therein, not only a means to health and strength, but also to manliness, which by the way, is a high ideal, and argues the presence of an exalted mind; for the debased mind does not bother itself about such things as high ideals.

That there is improvement in strength and powers of endurance may be proved by the fact that there is no record of the past—outside the mythical and legendary—but it has been equalled or surpassed by some present-day hero; and we assert without hesitation that all the pages of history cannot furnish us with finer instances of cold-blooded courage and self-

sacrifice than may be found in the columns of our daily newspapers.

Since writing the above we have had brought to our notice the views expressed by the heads of certain colleges at Oxford and Cambridge, to whom had been put the question as to whether the undergraduate of to-day is, morally and physically, as good as he was twenty or thirty years ago. And the consensus of opinion of these learned men, whose position and experience qualify them as the best judges, is that the average undergraduate is physically, intellectually and morally a better man than his predecessor of twenty, thirty or even forty years ago. Drinking has decreased, the number of those who take Honours instead of Pass degrees has very largely increased, and the standard of the different schools is higher, while at the same time the records of all University athletics are better than those of the past twenty years.

As the reply given by Mr Arthur Sidgwick, for many years Fellow-Tutor of Corpus, is typical of the majority of those elicited, we give it, in full:—

‘First then, the *Laudator temporis acti*, better described as the *Depreciator of the Present*—for that is his real aim and function—exists in all healthy and flourishing institutions, and must be expected, and allowed for, and disregarded, and where possible, exterminated, like other frauds and parasites. He exists in Oxford, as in other institutions which flour-

ish, and need not be further considered. Though always a nuisance, he is not a danger.

'As to the main question, about the alleged decadence of the undergraduate intellectually and physically, if I had to deal with it I should require to see the *evidence*. What *experience of fact* has the accuser had? Is he going by the class-lists? Or by the athletic reports? Or by his friends and acquaintances? Have Oxford men fallen off in the class-lists? The calendar will answer that question. The sporting papers and records will answer the other.'

THE PURPOSE OF THIS BOOK

The Young Man of to-day is not effete—the present generation has its weaklings, as had every other generation but there are signs that even here we are not quite so squeamish as of yore, and that we are acquiring moral courage enough to examine the cause of the presence of the weakling, to grapple with the subject of Propagation of the Race, and recognise it as a Science, with laws to be studied and respected—taking him all in all, he is a credit to his generation: he has his shortcomings—and the world would be a most uninteresting place if one and all of us were perfect—and perchance he may discover them for himself by a perusal of these pages, and, it is hoped, may be enabled to view them through the same

medium as he would observe them in another, and so learn whether they become him or otherwise: whether the possession of them makes him appear as a dashing man of the world or as a silly young puppy, evoking not admiration, but contempt and disgust.

CHAPTER II

THE SOWING OF WILD OATS — A
LITTLE SERMON — THE USE AND
ABUSE OF ALCOHOL — MY LADY
NICOTINE — WHY SMOKING PRE-
VENTS GROWTH IN THE YOUNG—
SMOKE SLOWLY—PIPE V. CIGAR-
ETTE—THE GODDESS OF CHANCE—
DOES IT PAY TO BACK HORSES.

THE Young Man, to signalise his entry into the realm of manhood, claims, almost as a privilege peculiar to his state, the right to sow a certain amount of wild oats. And we see no reason to dissuade him, for he can come to no harm so long as the oats sown are good, honest grain, or even sterile chaff, from which no rank weed may spring forth to poison the sower's, or another's, pathway through life.

The impulse— if it can be so called—to sow wild oats is based on vanity—from a desire to 'show off'; although the Young Man usually expects—and more often than not is woefully disappointed—to derive some sort of pleasure from this particular

kind of agricultural operation. He is introduced to the idea by the example of his fellows; and if in his character there is the necessary small proportion of irresponsibility without viciousness, combined with a true sense of humour, he may expect to reap a little harvest of enjoyment, with a bit to spare for others.

But it is altogether different in the case of those who, lacking discrimination, mistake recklessness for irresponsibility, blackguardism for harmless frivolity, obscenity for wit, and who hope to find lasting delight in moral degradation.

A LITTLE SERMON

Young men are apt to regard a course of profligacy as something about which to make a boast to their companions—they call it 'seeing life.'

Seeing Life! Seeing the leavings of life, the squeezed-out fruit of life, knowing a bar here, and a member of the demi-monde there, drunk very frequently, and ill every morning! Life! The atelier of an overdressed *fille de joie*, bargaining her pleasures, haggling for so much more, impatient to rid herself of the impersonal creature whose passion she has served. Life! Never to meet a decent, clean-minded woman; never to meet a man who can talk naturally and of normal things. To live thus is to live outside Life in a little world where the fresh scent of

the violet is drowned in patchouli, and Nature's song by the blare of music-hall choruses.

The very sun shines in vain for such a one; for he prowls o' nights like an unquiet spirit.

He never wakes in the morning, fresh as paint, ready and eager for what the day may bring forth. He never tastes the pure joy of untroubled sleep, never can he say in his heart: 'God's in his heaven; all's right with the world!'

'Sow your wild oats, but sow them cleanly.

'Do reckless things, reprehensible things, foolish things, if you will—but in your wildness be clean.

'Remember this: the very men whose opinion you most value—those breezy, unsentimental men of the world, cynical, self-possessed, knowledgeable—these find no amusement, or cause for admiration, in the spectacle of the Young Man and the Strange Woman.

'You can see them shrug their shoulders: if you are near enough you could hear them say, impolitely but pointedly: "Silly ass!"'

'It is not nice to be thought a silly ass by a man of the world—it is much worse than being regarded as a great sinner by the godly.

'Many young men have an idea that the world whose opinion they value look upon them with good-natured tolerance, finding excuses for their unpleasant diversions.

Nothing is farther from the truth than this.

'Remember that, in nine cases out of ten, the youth who plumes himself that he is being "manly" is regarded by men as a precocious little beast with unhealthy views. There is in human nature an inherent tidiness which sorts humanity into well-defined classes. If nature abhors a vacuum, mankind abhors a misfit. It loves a manly man, and a womanly woman, and a boyish boy. It despises an effeminate man or a masculine woman; but most of all it detests the freakish precocity of the mannish youth.'

The above admirable little sermon, which we have taken the liberty of adapting from an article by Mr Edgar Wallace, cannot be too well laid to heart by every young man. The writer shows a thorough knowledge of human nature. The lesson he teaches might also be studied with profit by those who have made it their task to deter the Young Man, by preaching at him, from following the paths whither Youthful Folly would lead him.

It is, as we have already observed, vanity which drives the Young Man blindly to commit excesses, the vanity of being envied as a 'goer,' as a 'man of the world.' In admonishing such a one, it is worse than useless to reprove him for his wickedness; such a proceeding is more than likely to spur him on; for to be considered wicked is just what the average would-be wild young man desires most of all: he rather prides

himself on 'being regarded as a sinner by the godly.' Many young men could be fashioned into decent citizens if their vanity were attacked: if reformers would adopt the course suggested by the above sermon, and set themselves to convince young fools that their folly only serves to make them contemptible and ridiculous.

Moreover, because so many silly young men slide down the paths of frivolity to the pit of degradation, these reformers hold up their hands in horror at all notion of allowing young men any licence whatsoever. They would have them spend their hours of liberty penned up in dreary institutions, extract from them pledges to abstain from this and that other luxury, the enjoyment of which makes life worth living. And as for the sheep who suffer themselves to be gathered within the folds of these shepherds, we have encountered them, and we say of them unhesitatingly that, instead of being good, they are merely goody-goody—in fact, they *are* sheep fit only to be under the constant care of such shepherds. And we would also offer the opinion that out of a sheep one cannot make a decent man any more than one can out of a 'silly ass.'

THE USE AND ABUSE OF ALCOHOL

We have no quarrel with the good things of life; most of them, like other things, are only harmful when indulged in to excess.

As much benefit may be derived from the use of alcohol as harm may result from its abuse. Upon some constitutions alcohol has little toxic effect, on others even a small quantity will cause disorder of the digestive apparatus, or nervous disturbance of some kind. Some men may smoke half a pound of tobacco, as well as a number of cigars and cigarettes, in a week, and feel no ill effects. Another may be upset even after smoking one cigarette. No single reason can be given for it, because such a number of important factors exert their several influences. This susceptibility of certain individuals is continually in the mind of the physician when compounding his remedies, and constitutes an ever-present difficulty. One patient, for instance, may show symptoms of mercurial poisoning after taking an ordinary dose of calomel; another may experience ringing in the ears after a fractional dose of quinine. And similarly is it so with alcohol.

There is a tendency, even among medical men, to take the meaning of the term 'alcoholism' in too narrow a sense, and to regard it as identical with the inability to resist the desire for excessive indulgence in alcoholic liquors, or, in other words, with dipsomania.

It must, therefore be pointed out that, from the standpoint of science and for the purposes of practice, the word 'alcoholism' includes all the changes, physical and mental, which arise when alcohol exercises

its toxic effect upon the human constitution, either for a limited period only, or for an unforeseen length of time. The limited effect produces acute alcoholism: the continued or long-lasting effect, chronic alcoholism.

Although dipsomania, or chronic alcoholism, is sometimes the result of insidious habit rather than of a constitutional craving, it is more often than not the case that the habitual drunkard suffers from mere inherited morbid tendency. It is doubtful whether alcoholism is actually heritable, although it is proved that patients who suffer from it are likely to beget epileptic or imbecile children; but there is still confusion as to cause and effect: the alcoholism from which the parent suffers may be due to epileptic tendencies which have expressed themselves in chronic alcoholism in the parent, but which he or she transmits to the children as epilepsy.

One of the greatest evils of alcohol is its effect of exciting a craving for it; and if this craving is experienced, even to a slight degree, it should be taken as an infallible sign that it is time to abstain from all alcoholic beverages at once; for it is proof positive that the system is peculiarly susceptible to the toxic effects of the drug.

One cause of the harm wrought by alcoholic drinks is the presence in them, especially in those of inferior quality, of fusel oil and furfural which are by-products of distillation, which are very difficult to re-

move entirely, and which are highly injurious in effect.

While on the subject of alcohol we may point out that quite as much harm may be done by immoderate consumption of other and supposedly innocuous non-alcoholic beverages. Four quarts of ale a day—a not unusual quantity with some men—will not do the harm that the daily consumption of an equal quantity of ginger beer, let us say, or of strong tea would do. Excessive tea-drinking is very common in these islands—far more so than is generally suspected; yet, drink-reformers, in their perfervid denunciations of alcohol, seem to be oblivious to the necessity of warning people that as much harm is wrought by excessive indulgence in tea as in alcohol; that the digestive and nervous systems are as speedily and incurably ruined by the one as the other; that the tea-drinking habit, once contracted, is as difficult to control as the craving for alcohol.

In many a tectotal family it is the custom to drink tea with nearly every meal, even with those which include meat among the courses, probably in ignorance that tannin, by its action on the meat, prevents the proper conversion of the latter by the gastric and pancreatic juices. No drink at all should be taken with meals, as the liquid washes away the digestive juices, especially the saliva in the mouth which contains the ferment, Ptyalin, which converts the starches; but if people will persist in acting contrary to the dictates of physi-

ology, they should at least take warning that with meat meals it is better that ale be drunk rather than tea or coffee.

A pure alcoholic drink is not the agent of the Devil, as some people suppose; it is as wholesome as tea if drunk in moderation and at reasonable times. But we would urge upon the reader that if ever he feels he cannot do without it, it is a signal to him that he *can* do without it, and that he will be far better if he never touches it.

So many temptations to drink beset the Business Young Man that it is as well for him to confine himself to those beverages which contain the lower percentage of alcohol; and for his guidance we append the following list:—

Pilsener Beer contains about 3.5 per cent. of alcohol, the proportion rising, in the order given, through *Munich Beer*, *Spaten Beer*, *English Mild Ale*, *English Stout*, *Moselle Wine*, *Hock*, *Champagne*, *Sherry*, *English Strong Ales and Stouts*, *Ordinary Brandy*, *Good Cognac*, to *Strong Rum* which contains about 75 per cent. of alcohol.

MY LADY NICOTINE

When the Young Man goes out into the world, one of his first introductions is to My Lady Nicotine, an insidious charmer who is almost as sternly discountenanced by reformers as is the Demon Alcohol.

Yet, just as the latter has to answer for a lot of sinful substances which ought not to be found in liquid prepared for human refreshment, so is much of the deleterious effect of tobacco smoking due to other poisons than nicotine. Though it must be remembered that alcohol is the basis of fermented liquors, as nicotine is of tobacco, and the explanation of their appeal to man.

Nicotine is very poisonous. Even in minute quantities it causes vomiting, purging and collapse — the memory of one's first pipe or cigar may recall all the symptoms of nicotine poisoning—though, as we have already pointed out, a degree of tolerance of the drug is soon acquired by the majority, while there are others who are never able to overcome a constitutional repugnance to it.

Nicotine, $C_{10}H_{14}N_2$, is a complicated compound of carbon, hydrogen and nitrogen the last being the characterising atom, wherefore it is spoken of as a nitrogen compound. It is an alkaloid, occurring in many plants, but particularly in the tobacco plant, from which it is obtained by distillation with lime.

The strength of tobacco does not depend upon the amount of nicotine contained, but upon the presence of other substances which are set free while destructive distillation, which is involved in smoking, is taking place. Many smokers are wont to regard as nicotine the acrid oil which collects in the stem of a pipe, or the brown

stain left when smoke is blown through a handkerchief, but which, in reality, is usually a compound of partially decomposed tobacco oils and certain breakdown products, the quantity and nature of them depending on the rate at which destructive distillation takes place—or, in other words, the rate at which the tobacco is smoked. Of the nicotine present in the tobacco only from one-seventh to one-half is found in tobacco smoke; it is the nicotine which has escaped decomposition by the heat.

WHY SMOKING ARRESTS GROWTH

There is no doubt that, harmless as the habit may be to the majority of full-grown men, smoking is very injurious to those who have not yet attained the stage of maximum development.

The human body is maintained alive and in full vigour by its capacity, within well-defined limits, to absorb and apply oxygen, and the process of oxidation is most active and most required during those periods of life when the structures of the body are attaining their full development. Experiment has shown that tobacco smoke has the power of arresting such oxidation, with the result that the normal growth is impaired. The habit is, therefore, most dangerous to the young. It does not always follow that a smoking youth will in consequence be undersized in stature, but it is pretty certain that, if this be not the

result, he will suffer from deficient development of his other organs or structural parts.

Besides checking the growth, smoking in the young produces disturbances in the blood, causing undue fluidity and change in the red corpuscles; in the stomach and the heart, giving rise to debility and irregular action in the latter; in the brain, suspending the waste of that organ, and oppressing it if it be duly nourished—which also accounts for the soothing influence of tobacco on the brain when the latter is exhausted; in the nervous filaments and organic nerves, leading to deficient power in them, and to over-secretion in those surfaces—glands—over which the nerves exert a controlling force; in the mucous membrane of the mouth, causing enlargement and soreness of the tonsils—smoker's throat—redness, dryness, and occasional peeling of the membrane, and either unnatural firmness and contraction or sponginess of the gums; in the bronchial surface of the lungs. A too early contraction of the smoking habit frequently results in eye trouble—dilatation of the pupils of the eye, indistinct vision, long retention of images on the retina, while there may be also vision of floating bright lines, luminous or cobweb-like specks.

Although experience shows that tobacco is the least injurious of all the luxurious habits, a great deal of harm is done by it because so many indulge in it when far too

young. We would counsel none to begin before the twenty-second year, though it should be remembered that the general opinion is that a man does not attain to his full stage of development, as a rule, before his twenty-fifth year.

SMOKE SLOWLY

The man who smokes a great deal unharmed is usually a slow smoker. This is because he gets a different collection of substances, less powerful in their action, into his mouth than does the fast smoker. Besides which, the more slowly the tobacco is smoked, the more opportunity there is for condensation of the liquid portions of the destructive distillation of the tobacco in the stem of the pipe or in the butt end of the cigar, and less chance of these reaching the mouth, whence they may be conveyed by inhalation to the lungs.

The fast smoker suffers furthermore in that in his case destructive distillation takes place too speedily. It must be obvious that air drawn through the lighted tobacco serves to keep alive the glowing zone, and to carry forward the bodies which result from the effect of the heat on the yet unburnt portions. These bodies arise much in the same way as do those during the analogous distillation of coal to obtain gas; and in general the products

can be put roughly into similar parallel classes. Increased draught means fiercer heat and greater promotion of these bodies or substances, a list of which would mean nothing to the ordinary man, but those who recognise them realise their highly poisonous qualities, which cause, however, only relatively mild effects on account of the smallness of their quantity; but we may mention that among them are to be found hydrocyanic acid, better known as prussic acid, and carbon monoxide, which are two of the most virulent poisons known.

PIPE V. CIGARETTE

The cigarette devotee may form his own conclusions when it is stated that investigation has shown prussic acid to be present in cigarette smoke to the extent of .08 per cent. of that contained in the original tobacco, but that it has not been found at all in pipe smoke.

We will conclude by offering the following general advice to smokers: *Smoke slowly*, use the pipe in preference to cigarettes; finally and above all, *do not inhale*—you are entitled to a little self-congratulation that you have, by acquiring the taste for smoking, achieved a triumphant victory over a few of the worst poisons known, but that is no reason why you should allow your whole system to become imbued with your potent, though

defeated, enemies which may, in course of time, undermine the strength which enabled you to overcome them in the first place.

THE GODDESS OF CHANCE

Frankly, we do not like the lady; and would counsel the Young Man to have nothing to do with her. She robs those who place their trust in her, the gain going to those who put their faith only in mathematical and logical fact. Yet the millions continue to offer their substance at her shrine with truly amazing hope and persistence; and we say, without hesitation, that the majority of young men are led to do so primarily through Vanity.

The passion for gambling is nearly always acquired; and although there are many who are strong enough to rid themselves of the habit when they find out how costly a one it is, there are also many others who become life-long and powerless victims to it. But unlike the tobacco-habit from which may be derived a great deal of pleasure with a modicum of harm, the gambler—the pure gambler, we mean, not the thoughtful student of facts who makes money out of the gambler—with the equivocal joys he experiences from his pursuit of the fickle goddess, always has to suffer.

We are not attempting to dissuade readers on the score of virtue; we would appeal to their common-sense, as it is our

intention to do in every case throughout this book.

DOES IT PAY TO BACK HORSES?

We will begin with horse-racing as the form of gambling into which the element of Chance, with certain reservations, most largely enters. And, that our appeal may be the more forceful, we will quote the opinions of different experts—the mathematician, the racehorse owner, the jockey, the professional backer and the racing journalist—who, as representatives of the various classes connected with the sport, ought to know, if anybody does.

Sir Hiram Maxim, as mathematical expert, shows that bookmakers make money out of racing because they do not trust to chance, but conduct their part of the game strictly on business lines. He continues: 'Betting does not increase the amount of wealth in the country, but rather diminishes it. The bookmakers of England must make several millions a year out of their business, and every penny of this is won from the unthinking public, who are quite satisfied to play at a losing game, providing that they have a remote chance of winning more than their stake. If it were possible to discover a system that would beat the bookmakers, then the bookmakers would very soon alter their rules of the game so as to meet the new state of affairs.'

The Earl of Clarendon, race-horse owner, says that he has never heard of any backer of horses who has ever amassed wealth. 'Although it may be for a short time his speculations have been successful, yet in the long run his losses outbalance his gains. Indeed, if they did not do so, how would the betting ring exist?'

Danny Maher, the jockey, says that if every horse were a machine, one could, perhaps, be able to foretell with some degree of certainty which horse would win a race; but, he remarks, horses—and jockeys, too—have their good and bad days, and this, with many another factor, goes to make the uncertainty that gives the bookmaker his chance.

We beg leave to quote 'A Professional Backer in *extenso*: 'Speaking from the professional point of view purely and simply, of the punter—that is to say, the general run of punters—it must be obvious that betting does not pay. Otherwise the supply of bookmakers would speedily run short! If I were asked to answer the question, 'Can betting pay?' I should give a very different answer. Betting is a business on the punter's side just as much as it is on the layer's side. It requires experience, discrimination, self-control and keen observation. Almost anyone who is prepared to treat betting on horses as a business, and devotes as much time and thought to it as is devoted to achieving success in any other profession, can make

money. However hard they work, men sometimes fail in business. It is so with the professional backer. They are not infallible. But most of them make a living, and many of them make a good income.

'The crowd that throngs a racecourse is, for the most part, out for a day's sport, with the existing prospect of 'making a bit'—with luck. They bet on every race without any knowledge or previous observation to guide them, or follow the advice of a tipster who is forced to give selections whether he knows anything or not, simply because the public demand it of him. To win for any length of time, when betting in this indiscriminate way, is impossible. Men often have a run of luck, it is true. I have known a man win week after week for six weeks on end, although he hardly knew a horse from a mule, and was guided simply by his own 'fancy.' The last state of such a man is always worse than the first. Money won so easily is easily spent: and when the tide turns, as turn it must, wild plunges to recover lead to loss, and sometimes to ruin. Human nature is what puts money in the bookmakers' pockets. The punter cannot wait to bet on some horse which has an obviously good chance, or about which he has really some information. The moment the horses assemble for a race a wild desire to gamble comes over him. He cannot bear to see them run unless he has something on. The result is that by the time the race arrives in which the horse

he came to back is engaged, he has nothing left.

'The man who makes punting pay is he with an iron control over himself. He is content to wait for days, and often for weeks, without a bet at all, although all the time he is attending meetings and keeping his eyes open for likely winners in the future. Then, when his chance comes, he has not frittered away his money, but is able to put it down. If the ordinary punter put on all the money in one race that he fritters away in six, he would stand to win a goodly sum at no greater risk. It is hard enough to find one winner, let alone half-a-dozen!'

'Vigilant,' of *The Sportsman*, writes: 'Does betting pay? It depends on the speculator and his ability to beat the market. In a word, as in everything else, cleverness prevails; but to anyone not thoroughly *au fait* with racing in all its intricacies on the one hand and the various and rapid changes in the market, my direct advice would be "Don't!"'

Of all forms of betting that on race-horses is the most popular among young men in business and in trade, but the same conclusions that it cannot pay applies to any other sport or pastime in which the issue depends so largely upon chance. There are many card-games in which the skill of the player may contribute to his success, and in these there is some excuse for adding to the interest of the game by playing for money; but there is always the

danger that the stimulant may engender a passion for gambling in those whose temperament drives them to seek to repair their losses too eagerly and without due calculation of the chances against them.

CHAPTER III

IMMORALITY DUE TO IGNORANCE —A POPULAR BUT ERRONEOUS BELIEF — GROWTH AND REPRO- DUCTION—THE EFFECTS OF PHY- SICAL EXERCISE—THE PENALTY OF REPRODUCTION — CONTINENCE VERSUS MARRIAGE

IN the foregoing chapter we announced our intention of appealing always to the common-sense of the Young Man to deter him from committing deeds which will reflect to his hurt. We do not mean by this that we disregard moral considerations; to the contrary, we are so firmly convinced that much of the immorality in our midst is due primarily to ignorance that we make our appeal directly to the mind which, properly enlightened, must influence the spiritual sense; for the latter is born of the former. Throughout this series of books the authors have deplored the general attitude of those responsible for the education of the young in hesitating to impart knowledge concerning the sexual functions and relations, and have insisted that much of the immorality com-

mitted, with the consequent ill-health and misery from which the innocent together with the guilty suffer, is due solely to the absolute ignorance of the vast majority, not only in sexual matters, but also in general physiology.

A POPULAR BUT ERRONEOUS BELIEF

Therefore, we say now to the Young Man: You have been told, often enough, by your elders that sexual immorality is evil and harmful; but, on the other hand, certain of your companions will try to convince you that as your conduct in this particular direction cannot possibly affect anyone else, there can be no evil therein, and that as it is 'known' to be not only beneficial but absolutely necessary to your health, besides being an experience befitting your newly acquired manhood, there can be no harm in it.

With regard to the argument concerning the experience befitting your manhood we have endeavoured in the last chapter to picture for you how the spectacle of the Young Man and the Strange Woman strikes the real man of the world, and we will now attempt to prove to you by physiological facts that the widespread belief that sexual intercourse is not only beneficial but necessary to the health of man is as erroneous as it is popular; and furthermore, that, taking into consideration the risks you run, not only of bringing

physical ruin upon yourself but of inflicting misery on your possible descendants, if you have a spark of common-sense—to say nothing of any human feeling—in you, you will, for your own sake, if not for theirs, abstain from a course from which you will experience none of the pleasure you anticipate, and so much vaunted by your companions, but which may result in consequences which may taint the whole springs of health, which may be transmitted to circulate in the blood of innocent offspring, and which may fill your mind with enduring, but unavailing, remorse.

In the case of woman, a regulated sexual life, such as is possible only in marriage, is often a highly satisfactory remedy for numerous ailments the cause of which may be attributed to celibacy. But in respect to the sexual functions, woman is differently constituted to man; and physiology proves to us that whereas woman gains in more than one way by the normal performance of the sexual act, it is the occasion of physical loss to man.

GROWTH AND REPRODUCTION

We would strongly urge the reader to procure and study two other books in this series, namely, 'Sexual Science' and 'Knowledge a Young Woman should have' by Dr A. A. Philip and H. R. Murray, published by Messrs Ewart, Seymour & Co., Ltd., Burleigh Street, London. In the former volume will be found detailed

information concerning the growth of the body from the original fertilised germ-cell: explanation is given as to how and why the body is built up, and of how, when the period of maximum growth is approaching, the body, instead of growing larger, sheds a part of itself to continue its kind. In the latter book, 'Knowledge a Young Woman should have,' some chapters are devoted to the various important processes which go to make up the prime function of nutrition of the cells of which the body is built—for it is the food brought to them by the blood which enables the cells to grow and to multiply.

One of the most important constituents of nervous and cerebral tissue, and of the seminal secretion, is a compound, or mixture of compounds known as *lecithine*, which is a cell product derived from the food-material converted by the process of digestion, absorbed into the system, and carried to the cells by the circulation of the blood (see Chapter VI. 'Knowledge a Young Woman should have'), but the proportion of which in ordinary food-stuffs is so infinitesimal as to render the repair of any waste of it an exceedingly slow process.

It has been shown by experiment that subcutaneous injections of seminal fluid, even of animals, are highly beneficial in cases of paralysis, nervous and spinal diseases generally; and it has been established by these and other similar investigations that the generative secretion con-

sists largely of lecithine, the careful preservation of which is, therefore, of the highest importance.

Further reference to the book just named will make it clear how the reproductive power becomes possible only when growth and development are ceasing—i.e., at the age of puberty, when the organism, instead of growing larger, sheds a part of itself.

With the human female there commences at puberty a *periodic detachment* of a portion of her organism which periodic detachment is involved in the process known as menstruation. But with the male there is no such periodic detachment, no such loss of surplus energy: the male expends this energy only when he exercises his reproductive function, whereas the female continues to suffer periodic loss which is arrested only during the periods of pregnancy and lactation. And here we have an explanation of the cause of the physical peculiarities which become apparent in so many unmarried women after they have passed the stage of maximum development.

THE EFFECTS OF EXERCISE

It is common knowledge that when any part of the body, such as the arm of a smiths' striker or the legs of a runner, is regularly and vigorously exercised, it acquires additional substance — in other words, it increases in bulk; the explanation being that in consequence of the

increased nervous excitation the flow of blood, carrying nutrition to the cells, and nerve force is directed to that part of the body in increased proportion. And the same rule applies to the exercise of the sexual organs. Indulgence of the sexual appetite has, *for a time*, the apparent effect of increasing the sexual vigour because of the proportionate increase of energy directed to the sexual organs, to the detriment, it must not be overlooked, of the other parts of the body, with the ultimate result that the individual becomes prematurely senile because of the inability of the other organs to perform their functions, when the sexual organs derive less and less nourishment from the blood, and become impotent.

Many men who have indulged too freely in the sexual act in the mistaken belief that benefit is to be derived therefrom, and becoming enfeebled in general physique, have sought to regain strength by a course of physical exercises, and have discovered to their dismay that, apparently, they have lost in consequence all power of performing the sexual act; and these people in their ignorance, attribute the trouble to the physical exercises, and abandon them at once. But the explanation of it is that the exercise of the other parts of the body has diverted the flow of blood to those parts, and for a time, until those other parts have been restored to their proper strength and stage of development, the sexual organs are deprived of the

nourishment they require to repair the waste they have been undergoing in the past. If the exercises be continued, it would be found that when the restoration of the other parts of the body is complete, there would be a return also of sexual vigour.

Woman is, as a rule, physically weaker, though sexually stronger, than man, again because, in her case, such a large proportion of the potential energy derived from the food is directed to repair the loss incurred by the continual activity of the sexual organs, which activity in strict maidenhood is never arrested until the climacteric is passed; and it is worthy of note, taking into consideration the normal sexual activity of women, that her sexual life is far shorter than that of a man.

Women, contrary to another generally accepted popular idea, beyond a certain expenditure of nervous force at the performance of the sexual act, suffer no material loss whatsoever—her contribution to the Law of Nature for the Continuance of Life consists in the involuntary production of ova, except during pregnancy and lactation, which, if unimpregnated, are expelled at the monthly periods; while there is every reason to believe that the material loss suffered by her male partner in the sexual act—his contribution to the Law—is to her direct benefit; for of the seminal fluid received by her, a proportion of it is absorbed into her system.

THE PENALTY OF REPRODUCTION

In many of the lower orders of animal life, particularly among insects and fish, the reproductive act is performed only at the cost of the life of the male; the salmon and cod, with some other varieties of fish (for method of reproduction see 'Sexual Science,' Chapter II), though the males frequently escape death, become terribly enfeebled after the spawning season. With birds and mammals the penalty is not so extreme. The birds, who are in full song and display their glorious plumage at the opening of the mating season, soon demonstrate the effects of the cost demanded by Nature: their notes diminish both in quality and quantity; their feathers moult or lose their lustre.

Rising through the mammals, the cost of reproduction becomes less apparent. But they are none the less real on that account. With every act of sexual intercourse there is in the males a waste of vital tissue which is never replaced.

From a strictly physiological point of view, therefore, sexual intercourse, instead of being beneficial to the health of man as is generally supposed, is actually detrimental; the advantages of continence, moreover, are not merely negative, for it has been shown that, if strict continence be maintained, the valuable substances contained in the generative secretion are reabsorbed into the general system, conserving the energy, and checking expendi-

ture, and thus serving to prolong life; for the living organism, apart from its powers of growth and reproduction, may be compared to an engine: it is a material system which transforms matter and energy: it is, within limits, a self-stoking, self-repairing engine. From birth there is continual repair and waste, the energy is derived from the fuel received in the shape of food, and waste is entailed by the exercise of the various activities. Until the age of puberty there is normally an abundant excess of repair over waste; after puberty, when the reproductive ability commences, there is an ever-decreasing disparity between repair and waste until these balance, when the reproductive ability ceases; then follows an ever-increasing excess of waste over repair until, by the accumulation of physiological arrears, or fatigue effects, the organism, in a state of physiological insolvency, dies.

Those people who advocate the doctrine that it is dangerous to suppress natural desires, and that man should not leave unused any portion of his body or resist the gratification of natural longings, are wont to advance the plea that Nature has evidently determined that the generative secretion should be discharged in some form or other as is proved by the occurrence of what is supposed to be the self-regulating action of the 'normal emissions,' or, as they are also termed, 'involuntary losses.'

But it has been clearly demonstrated

that the will can prevent even this involuntary waste—a waste, moreover, which has never been observed in male animals kept to themselves in captivity.

Professor Furbringer, of Berlin, writing on Sexual Hygiene, says: 'I cannot remember a single case of a healthy individual in whom I could discover no other cause but continence for conditions of ill-health. People do occasionally complain of discomfort, of a feeling of pressure or tension, but these inconveniences are easily overcome, and without any "artificial correction." It is true that some eminent experts are of a different opinion, and that this opinion is based upon genuine cases of disease due to continence; but I am inclined to regard these cases as exceptions confirming the rule. I cannot allow a comparison between the sexual desire and such natural instincts as hunger and thirst, because food and drink are in all circumstances vital necessities. One might as well advocate drunkenness because it is due to a craving for alcohol! I may say here for the same reason I never dare to recommend to unmarried young men the gratification of the sexual desire as a curative measure.'

Against the argument that sexual intercourse is not a healthful necessity may be brought the evidence offered by statistics which show that married men have, as a rule, a much better chance of prolonged life than have single men. But to accept this evidence as argument is to assume

that all single men are continent—an assumption too much opposed to known fact to be considered even for a moment.

It is not the frequent gratification of the sexual desire which constitutes the cause of the remarkable comparative longevity of married men. Rather must it be taken for granted that their more orderly and regulated mode of life, their average less abuse of alcohol, and the relative infrequency of venereal infection, and of its consequences, are the factors which play the principal part. Besides which, it must not be forgotten that the quality of married men is, on the whole, somewhat better than that of single men; for marriage involves, even in our present day, a certain, though by no means adequate, selection of the fittest, inasmuch as highly degenerate individuals, such as idiots, lunatics, cripples, &c., are, as a rule, excluded from it.

CONTINENCE VERSUS MARRIAGE

But, it may be argued, if sexual intercourse is detrimental to the health of the male, all idea of marriage should be renounced by him; for by a life of absolute continence he may reabsorb into his constitution the whole of his reproductive secretion, thus promoting in the fullest possible manner the development of his mental and physical vigour and capacity, and may thus guarantee himself a considerably lengthened span of life.

But to advance such a plea is to express

the idea that Marriage has nothing to offer but opportunity for frequent gratification of the sexual desire; it is to forget that even if by a life of continence man may stave off decay and death, he can only *postpone* them—the end must come at last! And at what cost? What boots it to the man that by stern renunciation of all his natural inclinations he has become ever so strong and intellectual? He has lived longer, perhaps; but he has had to live alone, and has never known the sense of intimate comradeship which can exist only between faithful and loving man and wife. Such a man, moreover, will have shirked his duty to his species, and his enlarged mental capacity will make this delinquency of his all the more uncomfortably apparent.

Our endeavour in exposing the falsity of a popular notion has not been to dissuade the Young Man from marriage, the advantages of which must be evident to every intelligent being; but to save him from committing acts in the fond imagination that he is thereby improving his health, when in reality he is injuring it, and running enormous risks of contracting diseases which may prove a veritable curse to him and his in after life.

CHAPTER IV

POPULAR IGNORANCE CONCERNING VENEREAL DISEASES—WHAT IS GONORRHOEA?—GENERAL SYMPTOMS OF THE DISEASE—THE CHRONIC STAGE OF THE DISEASE—GONORRHOEAL INFECTION IN THE MARRIED STATE—APPALLING PREVALENCE OF THE DISEASE

THERE could be no surer index of the profound ignorance of the average Young Man concerning sexual relations than the lighthearted manner in which he regards the contraction of venereal disease, and particularly of the dreadful scourge known as Gonorrhoea. The publication of the fact by one that he is suffering from this disease is treated by his companions rather as a matter for mirth than for horror and shame. Yet there is hardly another disease—not even syphilis—that may have such far-reaching and disastrous consequences as Gonorrhoea, and especially so if the infected person enter the married state. And with the view of impressing upon our readers the terrible nature of this disease, we propose devoting a whole chapter to the discussion of it.

WHAT IS GONORRHOEA?

Gonorrhoea is an eminently contagious disease, the infection taking place almost exclusively by means of sexual intercourse, though the children of infected individuals may become infected at birth or during foetal life.

The contagiousness may last for months or even years, and yet the phenomena from which the contagion proceeds may be so slight that the presence of the still existing infectious disease can be recognised only by the most careful observation and by special examinations undertaken for that particular purpose.

Gonorrhoea attacks principally, and in most cases almost exclusively, the sexual organs. The urethra and the vagina are the usual seats of the disease; but other mucous membranes, such as that of the rectum, may become infected, for the disease is either localized in the seat of infection, or spreads over various organs in the shape of complications.

The majority of diseases, by their attack on the organism, bring about a certain immunity against future infection; *but it is not so with Gonorrhoea.* The same individual may contract the disease again and again.

Many a married man who has suffered from gonorrhoea before marriage has, in his belief that he cannot be again infected, had no compunction on the score of indulging in extra-connubial intercourse,

with the result that he does contract it, and, what is worse, infects his wife.

The disease is caused by a specific micro-organism, the gonococcus, which is present in the affected tissues and in the discharges from them; and all that is needed for the conveyance of the disease from the infected person to another is that the gonococcus be brought into contact with a suitable soil—i.e., a mucous membrane—and thereon deposited. The mucous membrane may be quite healthy, and there is no need of injury to its surface for the gonococcus to thrive and multiply, and subsequently to penetrate into the tissues and thus give rise to the disease.

It is quite possible, therefore, that the disease may be contracted without the performance of the sexual act: the infected genital organ may be brought into simple contact with the healthy genital organ, or the latter may be touched with a secretion containing gonococci.

Taking the high contagiousness of the disease into consideration, and also the general ignorance concerning it, it is not surprising that it is one of the most prevalent diseases to which mankind is subject. At a certain medical council it was asserted, and the assertion was supported by every doctor present, that in this country the proportion of the adult male population who escape gonorrhoeal infection is so small as to be almost insignificant.

The prevalence of gonorrhoea is the

more appalling when we consider the number of infected men who enter the married state, either assuming that, because the acute stage of the disease with them is past, they are cured and can no longer infect others, or in ignorance of the injurious nature of the disease.

THE CHRONIC STAGE OF THE DISEASE

There are some reckless individuals who get married while suffering from gonorrhoea in an active stage; but the number of them is not to be compared with that of those who marry while suffering from the disease in its chronic state. Of these people a number may have had the assurance of their physician that they have been cured, because it is so exceedingly difficult to tell whether gonococci are present after the active symptoms of the disease have disappeared. That many doctors have been mistaken in pronouncing a cure when all the outward signs of the disease have disappeared is proved by the enormous number of cases of chronic urethritis—inflammation of the urethra—which come to the notice of medical men.

There are two groups of so-called 'chronic gonorrhoeas,' one of which is infectious, and one is not—infection depending entirely on the presence of gonococci.

A post-gonorrhoeic residual affection may cause a slight mucous discharge so in-

significant that the patient himself may be unaware of it, and which may be either infectious or non-infectious.

According to an eminent specialist in uro-genital diseases, there may be gonococci present in the most unnoticeable, most superficial catarrhs of the mucous membranes, and they may be absent in the most distressing and most dangerous diseases of the uro-genital organs. Though there is no difficulty in diagnosing whether the disease was originally caused by a gonorrhoeic infection, the outward signs offer no evidence whether that infectious gonorrhoeic disease is still present, or whether what is present is nothing but a residual inflammation of a non-infectious nature. It is quite possible for the gonococci to disappear, and to leave behind such changes in the organs, changes which are, practically, fresh diseases possessing no infectious character.

It is, therefore, essential that every individual who presents any symptoms derived from a former gonorrhoea should be subjected to a special examination for the purpose of ascertaining whether these symptoms are still of an infectious nature. It cannot be repeated too often and with too much emphasis that even the most insignificant processes may retain their infectiousness.

Particular stress must also be laid upon the circumstance that this infectiousness can continue for years in spite of the absolutely certain exclusion of a new infec-

tion. Practically speaking, it must be taken that the gonococci are capable of a vitality extending over many years.

There is a supposition, accepted by many medical men, though it has never been proved, that the gonococci found in chronic gonorrhoeas gradually diminish in virulence. But this supposition is not of the slightest value in the estimation of each individual case. For even if such a diminution in virulence is possible, there is always the fact to be reckoned with that most acute and most malignant gonorrhoeas have been caused by infection from chronic cases.

The supreme question to be decided, therefore, by medical examination is to ascertain without the possibility of mistake whether any gonococci are present at all or not.

It is, of course, clear that the danger of infection is greater, the greater the quantity of gonococci present. For this reason chronic gonorrhoeas are not infectious every time there is sexual connection. In the married state, however, there is danger in every case, since on account of the frequency of intercourse even a few gonococci still present must eventually become active, particularly as frequent coitus, such as is indulged in during the early days of marriage, is in itself sufficient to cause an increase in the inflammation, and consequently a multiplication of the gonococci.

GENERAL SYMPTOMS OF THE DISEASE

The period of incubation is usually from three to four days; but the symptoms may appear on the second, or as late as the tenth or eleventh, day after infection. The acute and painful stage, under normal treatment, lasts from three to four weeks. During this period there are free purulent discharge, pain and difficulty in the passing of urine, and general febrile symptoms. The disease, even in spite of careful and prompt treatment, may become chronic, and may continue for months or even years as a gleet which is a persistent discharge of glairy mucus, and which, as has been already observed, if gonococci be present, is highly contagious.

For treatment, there is none to be recommended but instant application to a doctor; meanwhile the patient should take as much rest as possible, should restrict himself to the simplest diet, and abstain from all stimulants.

Those who have contracted this or any other venereal disease should resolutely close their ears to all suggestions from lay sources. Adopt no treatment but that which the medical man advises, and above all, avoid all quack remedies; for there is no infallible general treatment for any disease under the sun; every course, to be effective, must be modified to suit the particular requirements of each individual case.

CONSEQUENCES OF THE DISEASE

One of the most frequent results of gonorrhoea is sterility. This is caused, firstly, by what is known as Azoospermia, a condition due to gonorrhoeal disease of the organs—the epididymis and spermatic cord—along which the semen travels, and so-called because the semen contains no spermatozoa (see 'Sexual Science,' Chapter III); secondly, by Aspermatisim, which is a rarer condition, and in which anatomical alterations, principally strictures, prevent the semen from taking its proper course; and, thirdly, Necrospermia, a condition arising from gonorrhoeal inflammation of the prostate and vesiculæ seminales. These organs secrete a fluid which is essential if the spermatozoa are to retain their vitality and mobility; and if that fluid becomes impaired the semen, of which it constitutes a part, loses in consequence its fruitfulness and utility. Necrospermia is sometimes temporary, varying in extent to the stage of the disease, and sometimes permanent.

Another and rarer, though by no means uncommon, result of gonorrhoeal infection is the loss of the power to copulate. The condition is caused either by local processes which render normal erection impossible, or which cause the sexual act to be accompanied by such pain that sufferers are compelled to desist from all intercourse. In chronic gonorrhoeas there is sometimes a more or less constant

involuntary discharge of semen—not to be confounded with the discharge of mucus—which results in general physical and nervous debility.

GONORRHOEAL INFECTION IN THE MARRIED STATE

If the effects of gonorrhoea confined themselves to the person contracting the disease through his own fault, there might be some excuse for lightly regarding the consequences; but the evil begins when the infected individual, knowingly or unknowingly, transmits the disease to other and innocent persons.

Even supposing that a man has before marriage subjected himself to a most thorough medical examination and has been pronounced to be cured, and yet infects his wife. From a moral point of view, he may, to a certain extent, be acquitted of blame; but this can afford no consolation to the innocently suffering wife. And how many men who have contracted venereal disease are there who are possessed of the moral courage to consult a medical man with the object of undergoing an examination to make sure that they have been cured to the extent that they cannot possibly impart infection? What man likes to speak on the eve of his marriage of his past uncleanness, of former intercourse with loose women? The universal horror of sexual diseases is so great that the temptation to keep secret the

fact that one has been at any time polluted by infection with one of them is too strong to be overcome by the ordinary individual. Even those few men who have some knowledge of the possible results of gonorrhoeal disease, prefer to risk the chance rather than disclose their shameful secret to a doctor, and perchance learn from him that their marriage must be postponed because of their condition.

But a moment's consideration and it will be seen that it is better to face the medical examination, and to learn the worst, if worst there be; better, far better than to risk the possibility of infecting a young wife and, perhaps, one's offspring. In which case the secret, to guard which so heavy a price has been paid, will be disclosed after all. The voluntary disclosure before marriage is a fearless and honest action deserving praise and recognition. But what shall we say of him whose moral cowardice allows his bodily corruption to be revealed by the suffering of his wife and children?

Gonorrhoea, as a rule, does not create sterility in a woman; but it frequently happens that the disease contracted before or during pregnancy causes such mischief in the generative organs either during or after labour that sterility ensues as a result.

Women, affected with the disease, suffer distressingly from mucous discharges which give rise to other complications such as gonorrhoeal rheumatism and chronic in-

inflammation of the reproductive organs; indeed the disease is usually the occasion of far more suffering to women than to men.

But the saddest result of all is the way in which the disease may affect children. It is calculated that at least 25 per cent. of the cases of congenital blindness are due to gonorrhoeal infection (blenorhoea) at birth or during foetal life. It has also been ascertained by a well known medical writer that in the large city in which he practises no fewer than 25 out of every 1000 children born suffer from this dreadful affliction. As another medical writer has commented: 'This is a terrible figure; and one, moreover, which shows to what an extent gonorrhoea is prevalent among women without being recognised or medically treated.'

PREVALENCE OF THE DISEASE

So far as this country is concerned, it has been stated that gonorrhoea is least prevalent among the working classes; the explanation being that workmen, soldiers and the like can more easily find non-prostitute girls of their own class willing to enter into amorous relations with them, and they are therefore less exposed to the danger of infection than those men who have recourse almost exclusively to prostitutes; furthermore, there is the preventive factor that individuals of the poorer classes marry at an earlier age than do those of other classes.

The moneyed classes come next in order, though their percentage is not so high as that of the middle classes; the reason being that men of the latter classes have recourse almost exclusively to street-walking prostitutes, whereas the moneyed man can afford to visit the less dangerous 'demi-mondaine,' or to indulge in the luxury of keeping a mistress.

Since the repeal in 1886 of the Contagious Diseases Acts the spread of venereal disease has continued in these islands almost without check, and it is safe to say that there can be scarcely one prostitute in the land who at one time or other has not been in contact with one or other of the venereal diseases, and from whom, in consequence, disease may be contracted.

Taking all that has been said in this chapter into consideration, is it not surprising that so many men, for the sake of a dubious pleasure, are willing to run the imminent risk of incurring so frightful a penalty? It is as surprising as it would be incomprehensible did we not take into account that the general recklessness is due almost entirely to sheer ignorance.

CHAPTER V

OTHER VENEREAL DISEASES—SYPHILIS—DREADFUL CONTAGIOUSNESS OF THE DISEASE—SYPHILIS IN RELATION TO MARRIAGE—SOME PECULIARITIES OF THE DISEASE—A REMINDER FOR THOSE ABOUT TO MARRY

BESIDES Gonorrhoea there are two distinct contagious disorders usually contracted by impure sexual intercourse. The first of these is Simple or Soft Chancre, or, as it is sometimes called, Venereal Sore. The second is the dreaded complaint known as Syphilis.

The soft sore begins within a few hours after contagion as a pustule, which bursts and leaves an excavated ulcer with abundant purulent discharge. It is usually multiple, and is rarely situated far from the genital organs. Though repeated attacks from the one infection are common, there is no general infection of the system

from this form of venereal disease. Treatment is usually by baths, injections, and various drugs of the aromatic and antiseptic class. But no trust should be placed in any diagnosis or course of treatment but that of a properly qualified medical man. One of the first measures should be thorough destruction of the chancre by means of nitrate of silver or lunar caustic.

SYPHILIS

Syphilis is unlike gonorrhoea in that an attack renders the individual more or less immune from subsequent infection. But although experience teaches us that as long as the disease lasts, no fresh infection can take place, there have been people, completely cured from one attack, who have become again infected. But such cases are of comparatively rare occurrence.

The origin of syphilis is unknown; but it is generally believed that it was brought to Europe in 1493 by the companions of Columbus on his first voyage of discovery. As is the case with most diseases when visiting unsalted communities, the disease was especially virulent on its first appearance in the Old World; and by the close of the 15th century it had spread like a plague throughout the greater part of the civilized

world, with the result that to-day most civilized nations have become to a certain degree resistant to it, and the disease is no longer so violent as it was, though all the efforts of science have never been able to eradicate it. It may be mentioned that in the sporadically occurring cases of malignant—or galloping—syphilis it is supposed that the ascendants for several generations have been relatively free from the taint.

The moistening of a suitable mucous membrane with a secretion containing gonococci is enough to give rise to gonorrhoea, but syphilis can only enter the system through an abrasion of the surface with which the virus is brought in contact, except in the case of so-called inherited syphilis, which differs from direct infection in this one respect that there is absence of any primary lesion. Hereditary syphilis is really a genuine infection either of the germ-cell, or of the embryo or foetus; for it must be understood that a disease cannot, strictly speaking, be *inherited*—all congenital diseases are acquired by infection:—The disease is transmitted by the act of generation or through placental conveyance during pregnancy.

CONTAGIOUSNESS OF THE DISEASE

The syphilitic, owing to the extraordinarily contagious nature of the disease, is more

dangerous than the leper; for not only is infection to be feared from contact with his person, but from everything which he has handled or which has touched him in any way.

Although in the majority of cases the abrasion by which the virus enters the system is situated on the genital organs, there are instances innumerable in which scratches or sores on the lips, the hands or any other part of the body have admitted the poison. Everything, as has already been pointed out, with which the syphilitic comes in contact may communicate the disease to others—his razor, his pipe, his hair-brushes, clothes, handkerchiefs, spoons, drinking vessels or any domestic article; while his blood secretions and discharges are specially dangerous.

After the absorption of the syphilitic virus there ensues a period of incubation, which varies from fourteen to thirty and even forty days. At the end of that time appears the first outward sign of the disease: a hard or indurated chancre at the seat of contagion. It is indolent, often painless, and throws off a thin, scanty, non-purulent discharge. It feels to the touch like a nodule of cartilage. If kept clean, it tends to disappear spontaneously; but if irritated, it may break down and suppurate.

About a week after the appearance of the chancre the nearest lymphatic glands become enlarged. Some six weeks after the development of the chancre a rash

usually appears, and is generally most marked on the chest. It consists of rosy red spots, which later become brownish. As this eruption fades, papules often occur, and speedily assume a coppery hue. At the same time constitutional symptoms, such as loss of appetite, general uneasiness, lassitude, set in; sometimes also, the skin peels off in scales. The hair and nails may suffer, becoming dry and brittle and even falling out. The mucous membranes are also affected. Ulcers and mucous patches develop about the mouth, tonsils and throat, while fleshy protuberances may appear about the genitals, especially in the absence of rigid cleanliness. Iritis and other eye symptoms, as well as muscular pains and articular swellings, may also occur.

These and similar manifestations may continue for months, and in many cases the disease seems to end with them; but a considerable proportion of patients, especially those in whom the early stages have been neglected, develop tertiary symptoms, which are often of a grave and intractable nature. These may be severe eruptions, such as rupia, which is a distressing skin disease; or tumours, known as gummata, may form in the subcutaneous tissues, in muscle, bone, brain, or other internal viscera. Along with such symptoms there is often a characteristic change in the general appearance, especially in facial expression and in the complexion. At a still later period nervous diseases, such as general

paralysis and locomotor ataxia, may follow. Worse still, there are cases of malignant, or 'galloping,' syphilis from which the patient emerges only with permanently shattered health.

But though syphilis may run a rapid, malignant, intractable, and even fatal course, the disease is usually amenable to treatment, which, however, must be begun early and persisted in for, at least, eighteen months to two years. And whatever the circumstances, we can but repeat our warning to all who may be so unfortunate as to contract this disease, that it may prove disastrous to them if they put their trust in the specious advertisements which are so perseveringly and so disgustingly paraded before the public by quacks whose sole aim is to fleece the silly dupes who resort to them, and on whom they retain their hold by continually exciting their fears.

The slightest suspicion that a venereal disease has been contracted should be reason enough to place the case without a moment's hesitation in the hands of a properly qualified medical practitioner. In the meantime, if delay be unavoidable, the pustule sores which may be observable should be well touched with caustic, the diet should be reduced and deprived of all stimulant, all excitement must be resisted and the patient must seek to obtain as much rest as possible, while the bowels should be kept open by moderately active aperients.

SYPHILIS IN RELATION TO MARRIAGE

Marriage is, of course, out of the question so long as infectious symptoms of the disease are present; but whereas in gonorrhoea there is a sure means of testing the infectiousness of each case by the presence or absence of gonococci, in syphilis this depends entirely on empirical observation: the obvious absence of diseased conditions in syphilis is no proof of cure; for the disease often presents latent periods which may last for years, and during which there are no outward signs that the poison is still slumbering in the system with its virulence unimpaired

Dr Ledermann of Berlin, an acknowledged authority on sexual diseases, has written: 'It has hitherto been usual to fix the period during which infection may be conveyed by contact at from three to four years since the illness began; but although cases are known in which marriages recklessly entered into by syphilitics in the first years of the illness have turned out happy, and have not resulted in a transmission of the disease, there are, on the other hand, instances in which infectious symptoms appear and transmissions occur, five, six, and even ten years afterwards. A definite statement as to the time during which the danger of infection exists is, therefore, not sufficient: it requires supplementing by other factors as well, which enable us to

fix somewhat more sharply the time limit of the cure.

'Among these factors we must take into consideration, in the first place, the course of the disease during the first years of its existence and the treatment adopted. It is true that far-reaching conclusions with regard to a radical cure cannot be drawn simply from the mildness and infrequency of the symptoms, and from their rapid disappearance in consequence of treatment. Often enough there supervene in such cases at a later stage severe tertiary symptoms, perhaps just because the patients, misled by the mildness of their illness, do not attach to it the necessary importance, and are negligent in carrying out the treatment. But if patients with a strong constitution and leading a sensible life are for three or four years under good medical supervision, and the disease takes a satisfactory course, the chances for the future are certainly favourable.

'On the other hand, there are numerous cases in which secondary symptoms keep accumulating for years, and which must be judged with less favour. Some of these symptoms, such as the mucous patches on the mouth and pharynx, may, perhaps, be due to constant irritation caused by the use of alcohol or tobacco; but for all that the question of marriage of these individuals must be weighed with particular care. In other more or less inveterate cases with severe symptoms there frequently remains after the cure of the disease a general

weakness of the organism which must have an important bearing when considered in connection with marriage.

'As regards those patients who have at any time shown tertiary symptoms, we cannot say that they are in every case non-infectious, and that the fact of their having any tertiary symptoms at all is a proof of their non-infectiousness. There are, however, cases in which tertiary symptoms appear early in the course of the disease, and there is no reason why the secretion from these tertiary lesions should not be as infectious as that from secondary ones. The main thing, therefore, is the interval of time between the appearance of these tertiary symptoms and the original beginning of the disease. The longer that interval the less the danger of transmission, especially if all symptoms have in the meantime remained at a standstill. Importance must also be attached to the seat of those tertiary lesions. After cerebral syphilis, for instance, a consent to marriage must be given only after a very careful deliberation, or withheld altogether if there have been repeated and serious relapses.

'Generally speaking, the contraction of a marriage may be allowed if five years, at least, have elapsed since the infection took place; that is, if no more manifestations have occurred during the last two years, and if the patient has received an energetic treatment. To make assurance doubly sure, the principle has been intro-

duced that the consummation of the marriage shall be preceded by a last mercurial treatment, the so-called "safety-cure." "

SOME PECULIARITIES OF THE DISEASE

In the infection of offspring there are some marked peculiarities of this disease. According to Colles' Law a mother affected with congenital syphilis may manifest no sign of the disease, but yet give birth to a syphilitic child. The mother may suckle the child without fear of infection, while the same child may transmit the disease to other non-syphilitic people. Again, a child may become infected during its intra-uterine existence by the father, and yet the mother may escape infection and remain healthy until she suckles the child, when the latter may impart the disease to the mother.

Syphilis contracted during pregnancy often leads to miscarriage. Should the labour be at full time, the infant is generally puny, malformed, and the victim of specific affections, such as the catarrhal affection known as 'snuffles,' and of various diseases of the bones and skin.

The danger to the general community to be apprehended from syphilis is not so great as that from gonorrhoea for the reason that men are not so ignorant, and therefore not so careless, of the dreadful

consequences which may ensue from contraction of the former disease. The sufferer, once he suspects his condition, is more ready to consult a medical practitioner, and, luckily for him and for everybody else, is more shy of adopting curative measures suggested by his friends.

The contraction of either disease is an occurrence fraught with the most serious possibilities, and what has been said concerning the risks of gonorrhoeic contamination run by men who consort with loose women applies equally in regard to syphilis. The wonder is, not that so many contract these diseases, but that there are any who escape. Against the abuse of alcohol we ought to add the charge that it is responsible for the ruin by venereal disease of many a young man who in their sober senses would not dream of bringing shame upon himself by associating with women of the streets, let alone run the risk of contracting a disease which will convert him into a being to be shunned by all, a more dangerous menace to all than the leper, and one whom, if we were not so inexplicably and foolishly squeamish in this country, we should treat as such.

We will conclude our discussion of venereal diseases with the reproduction of a circular issued by the Société Française de Prophylactique Sanitaire et Morale. The circular has been formulated with a view to its distribution among all young men about to marry, and the intention of

the society is one which cannot be too highly commended. It is entitled

INSTRUCTION TO FUTURE HUSBANDS AND WIVES

AND the following is a translation of the original :—

1. You are about to marry one another and to create a family.
2. You have on the strength of your mutual attachment and of your material conditions decided to lead a joint happy married life.
3. But it is just as important to think of your health, from which will depend also the health of your partner and that of your children.
4. Perhaps you have had the misfortune to contract one of those infectious diseases, which are popularly called 'diseases of youth,' 'venereal disease,' or—very wrongly—'shameful and secret complaints.'
5. Two of these—gonorrhoea or the 'clap,' and syphilis or the 'pox'—may bring to a family the direst consequences.
6. If you get married while still suffering

from an infective stage of one of these diseases (gonorrhoea, a still existing discharge; syphilis, the presence of a rash on the body, or of pimples on the mucous membranes), if you therefore convey with your full knowledge and with absolute certainty your disease to the individual who places trust in you, it constitutes a crime. Whoever becomes guilty of such an infamous action brings upon himself a shameful and disgraceful future, and may probably have to look forward to a legal dissolution of the marriage with all its attendant consequences.

(We may observe that we have already pointed out that the infectiousness of venereal disease may continue long after disappearance of the outward signs of the disease, and that the absence of them must never be taken as indicative that the stage of non-infectiousness has been reached.)

7. Gonorrhoea is conveyed through a discharge from the urinary passage, even only through an apparently insignificant drop; and is apt to cause, particularly in women, a series of complications (inflammation of the womb, peritonitis, &c.). It frequently gives rise to a long illness, necessitating staying in bed, and sometimes severe operations, and leads with almost absolute certainty to barrenness, and in

very many instances to blindness in new-born infants.

8. Syphilis, which commences with a small sore spot, and which leads subsequently to eruptions on the body and on the mucous membranes, can attack in its further course all the organs, and will cause, if the brain also become affected, very often softening thereof and insanity. Children of syphilitic parents are liable to die while yet in their mother's womb, or they come into the world misshapen and deformed. They can infect their wet-nurses and those around them, so that it may come to actions for damages and to a public scandal.
9. Remember that, even with an energetic treatment, and even after many years, the curse of the disease may be insufficient and incomplete.
10. It is therefore the duty of every honourable man to let himself be examined by a qualified doctor. But be on your guard against quacks! You will then know whether you are completely cured, and whether you may get married without risk, or whether you must yet postpone your marriage for a while. In this wise you will be averting a great calamity.

Suppose a man, not in financial circum-

stances good enough to allow him to advance the plea of a desire for extensive travel as an excuse to absent himself from his family for an indefinite period, should become infected with syphilis—what is such a man to do? If married, there are his wife and children to be considered; if unmarried, his sisters, brothers, parents.

He may have duly placed himself under medical care; but he must live somewhere. If he stay at home he may communicate his disease to those most dear to him. If they are to be safe, they must not come near him, they must not touch, except with extreme precaution against contamination, the things he has used.

And how are they to be put on their guard?

There is only one way. Shameful and degrading as the truth is, it must be revealed without hesitation. No matter how much they may have honoured and respected the guilty one, they must be warned, even though respect and honour fall to the dust in the moment of revelation. The price is not so heavy as would be that of the knowledge that a dear one, perhaps in consequence of a helpful act, has become infected.

The mere thought of such a situation arising is painful; but such a situation so often occurs, and the result of silence on the part of the syphilitic has been so frequently and so appallingly visited on

innocent people, that we feel it our duty to remind the Young Man that to be in such a situation will, more than likely, be his experience if he traffics with the Strange Woman.

Is it worth it?

CHAPTER VI

THE PURSUIT OF HAPPINESS—
THE ACQUIREMENT OF HEALTH—
A PARALLEL—THE FIRST STEP TO
HEALTH—A FEW WORDS ABOUT
FOOD — VEGETARIANISM — EXER-
CISE PHYSIOLOGICALLY CONSID-
ERED—PHYSICAL EXERCISE

ALL of us, without exception, desire that Destiny shall provide us, as companions on life's journey, with happiness, wealth and wisdom in abundance. And yet the majority of us neglect to fit ourselves out properly for the undertaking of the journey, with the result that we toil painfully along, and the three above-named jolly companions soon loose all patience with us, and scamper on ahead to join others more vigorous and more worthy of them.

Of the laggards, a proportion blame that vaguest of vague human conceptions entitled Luck; others, perceiving the truth—that it is their own physical debility which is checking their progress—seek to gain the health and strength they lack by hook or by crook, never pausing to question as to the reason why they are not so strong and healthy as they should be. These

people look about them; physical exercise, they understand, has made this or that man healthy and vigorous, and straight-way they plunge into some system of physical exercise, generally attacking it with an awe-inspiring violence which speedily reduces them to physical exhaustion and spiritual dejection. Others, again, fall victims to the specious arguments of food-faddists, and become vegetarians, uncooked-food devotees, or starvation dietists, without bestowing the slightest consideration on the particular requirements, or idiosyncracies, of their constitutions, and ignorant, or scornful, of the truth contained in the old saying, 'one man's meat is another man's poison.' But the majority of the laggards proceed to destroy all chance of ever attaining their object by recklessly administering to their interiors drugs and medicines advertised or merely recommended by friends and acquaintances, despite the most profound ignorance as to the nature and properties of the drugs, and of their effect on the system.

And what is the ultimate Fate of such people?

The first abandon all idea of physical culture, and hamper the good work of those who understand its importance by bleating incessantly of the 'harm it has done them.' The second class usually become confirmed dyspeptics, a plague to themselves and to everybody else. And the third class? Well, they manage to keep alive somehow,

although they never forsake their beloved drugs; otherwise it would be difficult to conceive how it is that patent medicine vendors prosper so exceedingly.

THE ACQUIREMENT OF HEALTH

However blind we may be to the advantages of Health at the beginning of life's journey, there are few of us who are not forced to recognise, sooner or later, that if happiness is to be attained by us, health must help us to it.

And how is Health to be acquired and maintained?

In the first place, it must be conceded that a great deal depends on the state of this engine-like organism of ours. If it arrive in this world defective in general construction or in detail, the blame attaches to our forbears; but even then we can do much by rational treatment of our organism to counteract its inherited disabilities.

But, by a gracious Providence, the majority of us escape the penalties incurred by the follies of our ascendants, and come to this life fairly well equipped for the struggle before us. The ills that we suffer are for the most part self-inflicted, and nearly always because of our ignorance concerning everything that really matters to our health.

A PARALLEL

In 'Knowledge a Young Woman should have' the authors have ventured to draw a

parallel between the individual in charge of his own organism and the driver of a steam locomotive. Let the reader try to imagine a driver of a steam locomotive flinging into his firebox, pell-mell and at haphazard, without knowledge whether it be combustible or incombustible, whether it will cause an explosion or put his fire out, everything and anything which seems to him likely to serve as fuel. Imagine such a man, conscious only that the firebox is there to have things put into it to be consumed, but troubling himself not one whit as to why there should be a fire there at all. Imagine him supplying his engine with liquid of any kind, sometimes, forsooth, when the engine shows signs that it is in need of liquid, but mostly for quite other reasons, or for no reason whatsoever.

This driver of our fancy is able to start and stop his engine, but has not the vaguest idea as to the mechanism which causes it to move, or of the source whence comes the energy to work the mechanism. Picture such a man not only oblivious to the need of the mechanism for oil, but absolutely unconscious that the engine has such things as lubricators. Our engine-driver takes it for granted that his engine has some sort of mechanism, but for the purposes of our parallel we cannot allow him to have any notion as to its whereabouts, or as to what it does.

We need go no further. Absurd as it is when seen in such a light, the average human being, placed in absolute control of

his own organism is in exactly the same position with regard to it as would be the impossible engine-driver of our imagination in charge of a locomotive of which he knows next to nothing.

In the first place, food is consigned to the mouth, which is supplied with teeth, defective or otherwise, the use of which it is obvious is to break up the food into portions small enough to permit them to pass down what we call the throat to a vague region entitled the 'stomach,' which is popularly supposed to embrace all that part of the body below that equally vague region, 'the chest.'

The amazing number of people who allow their teeth to become defective, making no effort to arrest decay of them, or to have them repaired, is proof enough that they have no sensible appreciation of the real reason for their presence in the mouth.

The food that is put into the mouth, en route for the 'stomach,' may be digestible or otherwise, suitable or the reverse; it matters not with many; it is taken at regular or irregular intervals, whenever opportunity offers or occasion obliges. One form of food may be persisted in to the exclusion of all other forms; this may be contrary to all known laws of physiology and dietetics; but that is of no moment to those who are blind to all reason in their infatuation for the fetish of their particular fad.

As for drink—we must quench our thirst, even though that have been created

by the imbibition of too large quantities of quite unsuitable liquids already. We drink, at the bidding of custom, during our meals, presumably also, to help the half-masticated lumps of food onwards to the 'stomach'; or we drink whenever invited thereto by others, whether we want it or not, in season and out of season.

As to what becomes of the food and drink when it has reached the stomach the majority of us are quite in the dark.

We overwork parts of the mysterious machinery on which our activities depend, while we allow other parts to remain in a state of almost continual inaction.

We are conscious of the fact that we breathe; but most of us would seem to be unaware that it is necessary that we should breathe fresh air. The majority do not like fresh air at all, and actually shiver when it is mentioned. These people are hard to convince that without the oxygen that comes to the lungs with fresh air the body could not maintain its natural heat; for it is by the union of the oxygen in the lungs with the carbon floating in the blood, which carbon is derived from the carbonaceous foods, that the body is furnished with its warmth. This simple fact revealed, and there is no more cause for wonder that people who are always mewing themselves up in rooms to which fresh air can never penetrate are always feeling cold.

Misusing our bodies as we do, we ought not to be surprised that they sometimes get out of order; the marvel is that our

inner mechanism keeps on working so long as it does.

THE FIRST STEP TO HEALTH

Belonging to a rational order of animals, what instincts we have are too blunted to be of much service to us. To supply the place of instinct, therefore, we must have recourse to our intelligence. And that must first be promoted by education. We cannot expect to jump all at once to full knowledge of our inner mechanism any more than we can expect to learn in one moment all the historical dates with which our teachers are so assiduous in storing our memory. It must be obvious that our wisest plan, if we would win health, is to begin at once to gather information concerning the more important organs of our bodies and the functions of each of them.

We would again urge the reader to secure a copy of 'Knowledge a Young Woman Should Have.' A perusal of Chapter VI of that book will give some idea of the principal details of the various processes of digestion and absorption of food materials, of respiration, circulation, secretion and excretion, all of which go to make up the prime function of Nutrition.

It must be understood that this organism of ours is in reality a colony composed of a vast number of minute living organisms—the cells, and their products. Each of these cells has its work to do and is in

need of nourishment not only in the shape of food brought to it by the circulation of the blood, but also in the shape of nervous force directed to it by exercise of that part of the body in which it is situated.

A FEW HINTS CONCERNING FOOD

We cannot here enter into a discussion of the various forms of food, but must once more refer the reader to 'Knowledge a Young Woman Should Have.' For our purpose it will be sufficient to state that human food is usually classified under two heads: nitrogenous foods, so called because they contain nitrogen, and non-nitrogenous foods. The former, which include flesh foods without the fat, eggs, milk, cheese, peas, lentils, beans, &c., are the flesh-formers, and are absolutely necessary to repair the waste that is continually going on. The non-nitrogenous, or, as they are also called, the carbonaceous, foods are subdivided into the carbo-hydrates, comprising the sugars, starches and gums, and the hydro-carbons—the fats and oils. The carbonaceous foods are the heat-giving, fat-forming and force-producing agents.

For the maintenance of health the following rules should be observed:—Food should be taken only at regular intervals; not more than three meals should be indulged in daily; a mixed diet of animal and vegetable substances is the best, for

too much animal food causes plethora, and too much vegetable food induces flatulence, corpulence and indigestion; it is better to arrange the diet so that the proteids (nitrogenous) are taken apart from the carbo-hydrates, which is to say that meals should consist either of starch foods or of nitrogenous foods, and that the same meal should not include both; if there be any tendency to dyspepsia, there should be only one daily meal of meat, and that should be taken in the middle of the day; it is better to eat too little than too much; every mouthful of food should be chewed slowly and thoroughly before swallowing so that the saliva has plenty of time to mix well with it. Saliva is composed chiefly of water, but contains also salts and ptyalin, which last substance is an active ferment, and by the action of which the starch elements in the food are converted into grape sugar, which is a soluble substance, while starch is never so completely. Starch foods, if swallowed hastily, pass through the stomach unchanged, and are not converted until they reach the Small Intestine where they meet with the ferment, Amylopsin. Unconverted starch food in the stomach is the original cause of many stomach disorders.

VEGETARIANISM

Existence upon vegetable food substances alone is much more common

than that upon animal food alone and, indeed, is the rule with many nations and people, who unquestionably maintain high strength and vigour upon it; but if man lives on vegetables, he must consume a comparatively large bulk to obtain sufficient nutriment: the Irishman and the Hindu, for instance, must eat seven or eight pounds of potatoes, or of rice, at a meal, potatoes and rice being relatively innutritious, in so far as the building of the body is concerned, being composed mainly of starch and water. Those people whose vegetable food is composed chiefly of the cereal grains and pulses do not need to consume so much; for the cereals possess albuminous principles, the gluten of the grains corresponding to animal fibrine, and the caseine of the pulses to the caseine of milk. There is no reason, therefore, why a man should not lead a most active and healthy life upon a diet composed of cereals, if he include eggs and milk.

But the question is not what is possible, but what is expedient. There are those who maintain that because it is possible for man to live on vegetables alone, as physiology proves; because many a man does live and thrive well on such a diet, therefore ought all mankind to confine themselves to vegetable diet. In answer to such an argument we may quote that no physician acquainted with the requirements and constitutions of men generally who live according to the customs and

usages of this and other civilised countries, would allow that a vegetable diet could become the rule without serious injury to the community. The healthy, active countryman, constantly exercised in the open air, might do well enough on an exclusively vegetable diet, but the town-dweller is in different case; such a system of diet to the city man of business, the housewife and the child, confined for the greater part of the day within four walls, might easily mean disease, or even death. Their organs of digestion and assimilation cannot extract from the vegetable mass sufficient blood nourishment, neither do they receive sufficient stimulation from it.

It may be argued that the evil is an artificial one engendered by artificial life; quite so, but we cannot all live in the open country, we cannot all engage in vigorously active pursuits in the open air. Besides which, the majority of us have inherited from generations of ancestors digestions better adapted to the assimilation of animal food.

The safest course is that each one should consult his own comfort and, within limits, taste. There are many people who find an exclusively vegetable diet best suited to them, and, such being the case, it would be foolish of them to indulge in animal food. But there are many more to whom a vegetable diet is positively discomfoting, who would be ill if they persisted in it. That physiology does not dispute that it is possible for

man to live on vegetables alone, it also indicates that a mixed diet is best for him after all. Unless a man is engaged in some strenuous occupation, he should consume albuminous material in the shape of animal food in sufficient quantity to make good the waste of his tissues, and this animal food he should mingle with such non-nitrogenous food—sugars, starches and fats, as will supply the carbon and hydrogen requisite for maintaining the temperature of the body.

To sum up the principles which regulate food and nourishment we may quote Dr Spencer Thomson, who says: 'We have vegetables as the first agents for taking up the elementary forms of matter, and combining and transforming them into such components as are suited to the digestive organs of the vegetable-subsisting animal which consumes them, and in which they are built up into the blood-filled animal frame of muscle, nerve, and bone, ready for the consumption of the flesh-eating animal, and also suited to the wants of man. We have these nutrient principles, consisting of albuminous compounds fitted to nourish albuminous tissues, of gelatinous to nourish gelatinous, of saccharine and farinaceous to supply the matter of fuel, and to take part in all the other operations of the system, or to be stored up as fat. Lastly, we have water, the aqueous principle (which constitutes rather more than two-thirds of the body's weight) as the necessary medium without which

these varied operations could not be carried out.

'To apply these principles to man, we find him so constituted as to be able to maintain health and life on animal food alone, or on vegetable food alone, but we also find him fitted by organisation to subsist on a mixed diet such as is most in accordance with the habits and usages of civilised communities.'

EXERCISE PHYSIOLOGICALLY CONSIDERED

But it is not by careful attention to diet alone that health is to be preserved. Every organ depends for its functional activity on the stimulus imparted to it and to the system generally by the excitant power of muscular movement which every man and woman ought to undergo. A man engaged in active bodily exercise is undergoing a regular course of excitement; his will is stimulating the nervous system to rouse the muscles to action; and in this process both the rousing factor and the roused are using up their own substance: the acting muscles send the blood more quickly through the capillaries and large vessels, and the heart must move more actively to keep pace with the muscles, and transmit the quickly returned blood loaded with effete matter to be purified in the lungs. To preserve the balance, the respirations are increased,

and the stomach is stimulated to crave for nourishing food and drink necessary to keep in repair the ever-wearing structures of the body, and to apply the fluid waste. Baron Liebig and his successors have done much to give us clear views respecting the changes which take place within the body under the influence of muscular movements; and from them we learn that in the expenditure of muscular force there is a certain metamorphosis in the tissues which require renewal in proportion to the amount of physical exertion and consequent waste.

'Exercise, therefore, is in the first place requisite as an ordinary excitant, to be brought into daily operation, that the vigour of all the functions of the body, whether of digestion, secretion or excretion, may be preserved; it is the merciful provision by which the decree, that man shall earn his bread by the sweat of his brow, has been converted into a blessing; it is the great compensating balance which gives the labourer sound sleep and healthy appetite and vigour, instead of the wealth which too often seduces to indolence, and palls every enjoyment of life.'

Exercise, again, is requisite as an agent with reference to the food consumed. Man ought not to expect, if neglecting muscular exercise, to have the same appetite for and enjoyment of food as if he led a strenuous life. But many men do expect this; they indulge in indolence, and then excite the appetite, by artificial means or

by tempting dishes, to take nourishment which is not required, and which must in consequence produce disorder somewhere. If an individual's employments are of a kind which do not require muscular exertion, his food should be diminished either in quantity or nutritive quality in due proportion. But it should be borne in mind that even under this regulation nobody can keep well or vigorous who does not take some amount of exercise daily in the open air.

PHYSICAL EXERCISES

With regard to physical exercises, by which are meant extra exercises indulged in apart from those involved in the pursuit of the ordinary occupations, it is certain that their beneficial effect upon the functions and health depends *quite as much on the excitement of the mind as upon that of the body*; and every one's experience must tell him how much his favourite exercise owes its renovating influence to the mental stimulation which accompanies it.

Many of the systems of Physical Culture now before the public have been drawn up without due provision being made for this all-important consideration of mental stimulus. Some of them demand a rigid adherence to a particular routine which soon becomes monotonous, or they involve a

lot of trouble in the provision and preparation of a whole armoury of apparatus; others contain exercises which require great exertion for their proper performance, or contain too many exercises devoted to the muscular development of one or other particular part of the body—the arms and chest, especially. Such systems have the effect of killing all the interest at first excited by the prospect of acquiring by their means increased health and vigour, and with the interest goes the mental excitement which is so necessary if the exercises are to have any beneficial results.

Perhaps, of all physical culture systems, the one designed by the Danish athlete, Lieut. Müller, meets most nearly all physiological requirements. The system is well known as 'My System,' and full instructions are given in a book issued by Messrs Ewart, Seymour & Co., Ltd., of London, under that title. The system contains exercises for nearly every muscle and organ of the body and each of them may be performed with different degrees of vigour according to the strength or inclination of the performer; the order of the exercises may be varied at will; no special apparatus is required, and (a very important consideration this, and one frequently ignored in other systems) each exercise is in itself a lung-exercise. Neither is the skin neglected: there are no less than ten devoted to rubbings of different portions of the naked body, and each of

these skin-rubbings involves, moreover, a special muscular and breathing exercise.

MENTAL STIMULUS AN AID TO DIGESTION

We may mention, while upon the subject of mental stimulus, that by the same course of reasoning it must be evident that nutritious foods which appeal to the palate are more likely to be beneficial than foods which are distasteful. It is a fact well known to physiologists that the enjoyment given by a favourite food acts as a nervous stimulus, which by increasing the action of the heart and consequently propelling the blood through the system with increased vigour, aids in the subsequent digestion and absorption of the food, besides encouraging the processes of secretion and excretion.

Monotony of diet, again, produces satiety, which is a certain indication that a change is demanded, not merely by the palate, but because the system requires other forms of food material. As Herbert Spencer has pointed out: 'It is a fact, established by numerous experiments, that there is scarcely any one food, however good, which supplies in due proportions or right forms all the elements required for the carrying on of the vital processes in a normal manner; whence it follows that frequent change of food is de-

sirable to balance the supplies of all the elements.'

Of course, it must be understood that the gratification of the appetite does not mean the excessive indulgence of it. The harm wrought by immoderation is incalculable; for the over-indulged appetite speedily degenerates—'growing,' in some mysterious way, 'by what it feeds on'—and sometimes is the precursor of a perverted or depraved taste.

CHAPTER VII

RECREATION—RECREATION IS ESSENTIALLY CHANGE—DANCING—THE THEATRE AND MUSIC-HALL—RELIGION AND ART — ATHLETIC SPORTS

RECREATION is essentially a change from the habitual occupation of body and mind : it is the renovation of the mental and physical powers after they have become wearied by exercise in one particular direction. Recreation is one of the highest pleasures enjoyable by man ; and it can be experienced by all.

It is a common saying that those who live in a constant whirl of worldly frivolities, or those who have never had to work for a living, cannot know what recreation is. But to make such a statement is to acknowledge ignorance of the real meaning of the word 'recreation.' The rich or poor idler, the social butterfly, would find recreation and much benefit therefrom in hard work, just as the labourer whose daily occupation involves severe physical toil, and whose mind is dull and untutored, finds his in doing absolutely nothing.

It is variety for which the tired muscles and brain crave; in variety only can recreation be found. From one form of physical labour one may seek the necessary relief in a hobby which also involves the expenditure of severe physical energy, but of quite a different kind, one in which other muscles of the body are brought into action; and the resultant general benefit is due to the mental interest in the hobby; for what has been said in the preceding chapter concerning the renovating influence of the mental stimulus applies equally to all manner of employment, mental or physical.

Appreciable improvement has been observed in the general health of the inhabitants of those districts where allotments for gardening purposes are provided. From a day spent in hard physical toil, the working man turns for recreation to gardening, and in proportion to his interest in the pursuit finds increased energy and derives benefit.

In which connection it may be of interest to note that gardening is the most usual remedial course suggested by doctors to city men suffering from dyspepsia in consequence of their sedentary habits. And there could be no more beneficial pursuit for the dyspeptic, seeing that it must be carried out in the open air; but it may also prove the reverse of beneficial if gardening fail to excite interest: the dyspeptic may stick to it diligently and conscientiously enough, but little improve-

ment will his digestive powers derive from the occupation.

Just as one man turns from one kind of physical labour to another equally strenuous for the sake of recreation, so do many engaged in one kind of mental toil find relief in another equally exacting.

Recreation is, in fact, *reaction*, and as such is beneficial to health. We have said that the so-called 'man of pleasure' may find recreation in work; that many such men do not experience the pleasure that recreation alone can provide is because they seek it by plunging yet deeper into the vortex of idle amusement and dissipation which can contain no real joy for them, but which must ever grow more and more monotonous to them.

Similarly, there are men so bound down in the pursuit of money, of power, of reputation, that they become slaves to their occupation; they begrudge every moment abstracted from the advancement of their ambition; yet the farther they advance, the farther off their goal seems to be. Such men rarely reach any kind of desirable haven at all. The process of amassing wealth, or of acquiring power, degenerates into mere morbid, insatiable passion with a speed commensurate with the degree of success by which it is attended. There is a saying we may often hear quoted as if it were to the credit of a man: 'he finds his recreation only in sticking to his business.' Such a man does not get any recreation at all; his mind is so en-

tirely devoted to the daily routine of his business that, at last, it is utterly unable to divert itself from the trammels thrown around it. No matter how strong such a man may be, his physical powers must eventually give way, and without their support the mental abilities will not be long in collapsing.

A man who thus feels himself enslaved by work should, by an effort, break through the restraint, the effort required will be a severe one, for it is to cast off the morbid state of mind generally connected with the condition, but the effort must be made, and those from whom it is most required are usually those who have it in their power to avail themselves of the means of recreation more than any other class of people—they are our wealthy, but overtasked in mind and body, merchants, lawyers, men of business, and, in some cases, medical men. They think they cannot leave their posts without everything going wrong, without risk of loss—risk of some rival taking up an investment, a cause, or a patient, and they may be right, but is the chance of such petty losses a reason for sacrificing health, life and happiness? For there can be no real happiness in an existence which is dependent on its continuance upon the same mill-horse round of actions.

The kind of recreation in which such a man should indulge must of course depend largely upon circumstances, but, generally speaking a complete change of scene and

air should be the first step, such a change as will break in upon old trains of thought, give new ideas, and afford pleasurable recollections when the active exertions of life are again resumed.

It argues well both for the physical and mental elevation of the population at large that the means of recreation, the cheap trips, the excursion trains, the public parks, &c., are so abundantly taken advantage of, for these must be regarded as part of the great sanitary movements of the age, the means of affording cheap and thorough recreation to classes who some years ago scarcely dreamed of such things. It ought to be recognised as the duty of every government, of every employer, to give abundant facility for pure healthy-minded recreation to the people; to do so is true economy of that only real social and political wealth—the healthy frame and mind of every individual of the community.

In attempting mere restoration to a *status quo* there is a risk of retrogression; every individual, seeking renovation of his powers in recreation, should strive also for improvement of them. There is no recreation in dissipation, in the pursuit of vice, in the perusal of obscene or trashy literature, in participation in filthy and degrading conversation; such is but the pandering to a depraved taste, and the individual sinks lower and lower in consequence. Evolution is the Grand Scheme of Nature—continual evolution upwards

towards higher scales; there cannot be such stagnation amid universal movement—those who do not rise must fall. In all your amusements, therefore, seek only those of an elevating tendency. Do not try to jump too high at first: improvement can only be attained by degrees. The appreciation of a good thing is a sure step to appreciation of a better—the recreation afforded by comprehension of the masterpieces of Art and Literature is only to be experienced by progressive education. Remember, also, in this connection, that it is as boorish to affect disdain of those who have passed to a higher intellectual level than yourself as it is priggish to despise those who have not ascended so far as you have done

DANCING

Perhaps, of all social amusements, dancing is as much discountenanced as any other by those would-be social reformers of whom we have written in our first chapter. Yet dancing, the active exertion of the body in sprightly, graceful movement, accompanied with exhilaration of mind, is most beneficial to health.

That dances are often held in ill-ventilated, super-heated, over-crowded rooms, during hours which are customarily devoted to slumber, is no argument that dancing itself is injurious. It would be far better were the agitation at present directed against dancing to be diverted to

encourage the provision of properly ventilated dancing-halls.

The question of late hours is no serious one to our view of the matter. Of course, if an individual persists in indulging in dancing night after night with consequent encroachment upon opportunity for proper rest, then serious injury may result to that individual who is so misguided as to over-indulge in a pastime to such an extent that it not only ceases to serve as recreation, but is in danger of degenerating with him or her into a depraved habit.

Dancing is no more to be censured because people become infatuated with it to their hurt any more than the normal satisfaction of the appetite can be declared evil because some people are silly enough to pamper and over-indulge it. There are thousands of people who have perforce to sit up all night, at work on railways, in newspaper offices, to mention but a couple of trades out of many hundreds; yet no one would think of denouncing railways and daily newspapers as things of evil because they keep people out of their beds o' nights.

A learned doctor has given his opinion regarding dancing as a means of recreation in the following words: 'Dancing is an exercise congenial both to the mind and the physical requirements of the young; it is, as every exercise in which the mind enters with pleasure and interest into the exercises of the body, a most efficient promotor of health. It is no argument

against dancing in itself that it is too often connected with many things that are injurious, such as late hours, heated rooms, and the like—these belong to other considerations.'

THE THEATRE AND MUSIC-HALL

Next to dancing, the theatres and music-halls are made the butts for the denunciatory shafts shot forth by the 'unco' guid'; not, forsooth, because of the intolerable atmospheric stuffiness so characteristic of too many of the majority of these places of amusement; but because in some few of them may be heard indecent allusions from the lips of performers, or ladies may be seen on the stage perambulating in more or less scant attire.

But the moral tone of the stage has improved beyond all measure during recent years; not because purists have been so loud or so persistent in their diatribes against 'the profession,' but because the stage has so earnestly striven, and is at last succeeding, to educate its patrons, teaching them to appreciate real wit—the music-halls have long since abandoned as too precarious their old policy of attempting to attract the public by the display of witless, gross obscenities—and to admire the fanciful creations of artistic costumiers, displayed to the best advantage by being worn by graceful women, rather than the unadorned female figure in plain and ungarnished fleshings.

Recreation may indeed be taken in occasional or even regular visits to the theatre, always provided that the taste for such a form of amusement—in this as in every other—is not allowed to degenerate into a passion.

RELIGION AND ART

Many people find recreation in religious practices, and so long as religious devotion does not develop into bigotry, great physical and mental benefits are to be derived therefrom. Religion is classed by physiologists among the extraordinary mental excitants which increase the action of the mental and, in consequence, the bodily functions, and which exercise a considerable power of beneficial stimulation, unless exerted in a disorderly and unrestrained manner. Among the extraordinary mental excitants are also included the various forms of the Emotion of Love—love of music, of the arts, of the sexes, &c.

ATHLETIC SPORTS

Athletic sports take first rank as recreative pursuits, for not only do they combine physical activity and pleasurable excitement to an especially invigorating degree, but they have this further advantage that they take place in the open air. It should not be overlooked, however, that games which involve indefinitely prolonged periods of action, such as cricket, for example, have on certain temperaments

the effect of causing nervous tension produced by anxiety as to the issue of the game. Some men will worry themselves to the verge of feverishness when watching from the pavilion the progress of their own side with the bat, particularly when the game is going in favour of the opposing side. Such a mental state undoes all the good which ought to be derived from the pastime; and men so constituted had far better turn their attention to other sports which keep the participants actively engaged from start to finish of each game.

In conclusion we may remark that the man who devotes his energies in due proportion both to work and pleasure, never sacrificing the one unduly for the other, will find recreation and consequent benefit from both; such a man, in fact, would be devoting his whole life to recreation. And recreation is a duty which a man owes to himself, to his family, to society and, therefore, to God; and neglect of this duty means loss of both mental and physical health.

CHAPTER VIII

FALLING IN LOVE—IS LOVE A DISEASE?—LOVE AND SEXUAL PASSION—THE MARRIAGEABLE AGE—A PRENUPTIAL HEALTH CERTIFICATE—IMPEDIMENTS TO MARRIAGE — EPILEPSY — CONSUMPTION—GENERAL RECOMMENDATIONS—MARRIAGE BETWEEN BLOOD RELATIONS

THERE is probably no problem so difficult to solve as that of the nature of Love of the Sexes. It has been said that solution of the mystery will mean that the mystery of life itself—the mystery of the whole scheme of the universe—will be thereby revealed.

It is the lot of all normally constituted people to fall a victim to the tender passion, and young people are urged to make sure, before they commit themselves to matrimony, that their feeling for the beloved is Love, the genuine article, and not mere infatuation.

Love, according to popular notion, is extinguishable only with life; like gold,

passage through the fire of tribulation cannot destroy it, but will rarefy and purify it. The emotion that fades with gratification of the desire from which it springs, or that flies out of the window as Poverty steps in at the door, is declared to be infatuation only.

But how is the lover, a prey to so many complex emotional dispositions aroused in connection with the idea of his beloved, to analyse the nature of his passion? Can he turn to the poets for aid in his dilemma? Will study of the scientists reveal anything which may enlighten him? Scarcely so, we think: constant devotion to the one does not depend upon the nature of the passion we have conceived in the first instance.

Yet most lovers find the poets in sympathy with them, forgetful that poets, alas, are of a type not distinguished for constancy in love. Too many of them, being married, have become famous, not only for their genius, but for the persistency with which they have sung the praises of women other than their own wives. Others, certainly, have been patterns of conjugal fidelity; but the love-life of the majority, if report speaks truly, has not been exactly an example of life-long devotion to one woman, and one woman only.

Lovers, as a rule, have little patience with science; and if a few turn to the scientists for help, they are confronted with so many, it is computed, as two hun-

dred and sixty-two carefully propounded theories as to the nature of the emotion—or, as some will have it, passion; for it is maintained that love is so complex that it cannot be included even among the complex emotions, but must be set apart in a class by itself. Indeed, certain psychologists go further and declare love to be a form of mental disease—aye, and a disease that can be cured by the remedial methods applied to such mental diseases as hysteria.

IS LOVE A DISEASE?

The argument that love is a disease is at least interesting, even though it may not be quite conclusive. In the first place, the *central idea*, which is the essential element in Love, shows in its effects a very close resemblance to the 'fixed ideas' which characterise so many mental diseases. Besides the fixed idea, there is a period of incubation—the period of initial development—during which the individual in love, like the sufferer from mental disease, does not know what is the matter with him, but feels restless, depressed and generally 'out of sorts.' There is a feebleness of will-power, and often a complete change of temperament and character.

Dr William Brown, in discussing the resemblances between certain forms of mental disease and love, has remarked: 'Some natures seem to be more susceptible to the love-fever than others, and

would appear to be possessed of a special mental "diathesis," or disposition, resembling the physical diathesis—the tendency to cancer, scrofula, &c.—so well known to the physician. And the greater proneness to the affliction when in ill-health, mental or physical, brings it also into line with physical disease. . . . Again, a love affair of a certain type makes the individual, in many cases, partly or entirely immune to one of a similar nature for the future. Whether it is possible to be in love with more than one person at the same time is a difficult question; but we are, perhaps, a little too ready to answer it in the negative.

'No one will deny that extreme cases abound which are obviously diseased, but these shade off to the so-called normal cases by imperceptible degrees, and the dividing line is not easy to draw. How are we to regard the numerous love-tragedies of history? What are we to say of the love murders and suicides which we read about daily in our newspapers? Can we honestly convince ourselves—those of us who are not entirely inexperienced in the matter—that these cases belong to a class by themselves, and have no closer relation to ordinary love than—say—a cancerous liver has to a normal one? Perhaps if a larger proportion of people were insusceptible to the passion—that some such people exist cannot be doubted—we should be more ready to class it among our diseases.'

LOVE AND SEXUAL PASSION

That the real purpose of love is but half realised by the majority is evidenced by the general attitude of lovers who are indignant at the merest suggestion that sexual desire has any place in their feelings towards one another. This confusion of idea takes its rise from the notion, instilled into us by education, that everything connected with sexuality is degrading and repulsive.

Love, of course, is not, simply and solely, desire for the sexual embrace with a selected individual, for sexual love is always accompanied with normally constituted people, by a feeling of benevolence for that individual, just as with some hetero-sexualists it is accompanied by an almost irresistible desire to inflict bodily harm on the object of passion.

Of no form of the love emotion is there so much general understanding which leads to a host of errors as there is of that which is known as love of the sexes. This form, which usually includes the active mating instinct, is held, almost without exception, to embrace that form which characterises the attachment of friend to friend. That the distinguishable elements of each are similar—desire for and pleasure in the presence of the person loved, depression at parting, longing for and focussing of the whole imagination on the memory of the absent one—is no criterion; for the same elements are char-

acteristic of all other forms of the emotion when the object is a person.

Friendly attachment can only result from a more or less intimate knowledge and appreciation of the general character and attributes of the object; it is purely a matter of acquirement. Sexual Passion, on the other hand, being instinctive, may be aroused at first sight of a particular individual of the opposite sex, who henceforth becomes the object. Further acquaintance may lead to knowledge and appreciation of the mental and spiritual qualities of the beloved; but it would take a long time for the feeling of friendship to develop side by side with the sexual emotion; indeed, it is extremely doubtful whether friendly attachment to a person would be able to exist when that person is already the object of passion. Schopenhauer says: 'Real friendship, founded on harmony of sentiment, does not exist until the instinct of sex has been allayed.' But sexual passion allayed by gratification with the object of it, friendly attachment—where there is harmony of sentiment—is the form of emotion which is most likely to take its place.

Even were it possible that the emotion of strong, mutual friendship could have existed between a couple before the advent of sexual passion, it is possible that the changed relationship might destroy all vestige of the former feeling of pure friendship. In any case, there is a better chance for a strong, mutual friendly

attachment which may arise after marriage, when the sexual passion has been allayed by gratification; and should this happen, then there could be no surer guarantee for the future happiness of the couple. It would be a link far stronger and more enduring than the most ardent form of the emotion which it supersedes. Passionate desire to satisfy the sexual instinct with the one and only individual diminishes with the gratification of the desire; but desire for satisfaction of the sexual instinct still continues, and in happy unions is satisfied by preference with the one who has now become the ideal mate; social considerations, the still active mating instinct, moral sense, habit, convenience, real psychical pleasure in the near presence of the now beloved friend, all contribute to prevent the sexual instinct from being excited to passion by outside influences.

Love is not blind, neither does it blind people who have fallen victims to it: it is the general ignorance concerning the passion which is responsible for most of the irretrievable mistakes which lovers commit. If people would only prepare themselves beforehand by trying to acquire some knowledge of the problem of sexual functions and relations, if they would only make some effort to study the subtleties of sexual attraction, of preferential mating, of the physical and psychical insistence of the sexual impulse to 'find a mate,' there would be a far smaller percentage of un-

happy marriages to record than there are at present.

THE MARRIAGEABLE AGE

But there is a consideration far more important than comprehension of the nature of sexual passion which every candidate for matrimony must take into account if he would avoid misfortune, and that consideration is that, not only he himself, but also his intended partner, be in a fit state of health for the new conditions of life necessitated by marriage.

Not merely for the sake of the parties thereto, but also for that of the possible offspring, no marriage should be contracted between people who are not perfectly matured, healthy and vigorous. If immature persons marry, the premature sexual intercourse is as injurious to them as it is to the mature who indulge to excess. As some people come to maturity so much sooner than others, it is difficult to define the exact limits of the marriageable age; but the general opinion is that no man should marry before his twenty-fifth year, and no woman before her twentieth. When the parents are much too young the children are not infrequently delicate; malformations and idiocy are also more commonly met with among the children of young parents than among those of the fully mature.

Persons of advanced age should, like those who are immature, also be dissuaded from marrying. Men over fifty years of

age are not always equal to the demands of a new marriage; the heart and blood-vessels, as a rule, are not equal to the strain of the severe 'rush of blood.'

A PRE-NUPTIAL HEALTH CERTIFICATE

Every marrying man and woman ought to be made to realise how gross a dereliction of their duty, not only to each other, but to their future descendants, it is to bring children into the world who will probably be the subjects of congenital anomalies, affected with hereditary disease or predisposition to disease, or devoid of the vitality and vigour which will enable them to withstand the ordinary wear and tear of life.

The choice of a husband or wife on this score is undoubtedly an exceedingly serious matter. The right of investigation by the one into the health of the other being denied by popular prejudice, means of discovery as to the health conditions of the prospective partner are very limited, and those that exist must be adopted by way of secrecy and subterfuge, which methods do not appeal to honourable people.

The proposal that, before a marriage license be granted, each party to the contract be compelled to produce a health certificate, is so admirable a one that it is a matter for wonder that the authorities have not adopted it. It is, of course, not

intended that the prenuptial health certificate should have anything to do with prohibition of marriage to individuals of feeble health. It is recognised that such a course would only aggravate existing evils by forcing many couples into irregular unions. The result aimed at is that each party to a marriage contract shall be by means of the health certificate be made fully aware of the health conditions of the other and if, despite physical weaknesses or other imperfections of one or both parties, the couple still persist in their intention to marry, then they will be allowed to do so, but, in that case, they will be marrying with full cognizance of the risks they run, and may consequently, take measures to avoid or mitigate the evils that may ensue.

The enforced production of a health certificate would, moreover, have the advantage that greater regard would be paid to the preservation of health by the individual, for will not the knowledge that, in the event of one day being desirous to marry, the individual must produce medical evidence as to the state of his or her health to be laid before those whose respect and consideration one will be most anxious to keep, be the most effective means of inducing people to pay due regard to hygiene, and act as a powerful deterrent to young men from indulging in irregular and licentious habits?

But there would seem to be very little hope of the prenuptial certificate ever becoming an established fact, and un^d its

production is enforced by law the supply of diseased candidates for marriage will continue undiminished. We grumble a good deal about so-called 'grandmotherly legislation,' but experience teaches us that people can be made to act sensibly by no other means. Take, for example, the case of the unprotected point of the ladies' hat-pin. The many accidents, serious and fatal, for which the hat-pin is responsible have proved time and again the danger to be apprehended from this presumably indispensable article, and there is hardly a being, male or female, who will not admit that the point ought to be protected. Yet despite popular condemnation, despite the invention of exceedingly becoming protective thimbles which would adorn any hat, the nuisance continues unabated, and will continue until 'grandmotherly legislation' comes in to put a stop to it.

Thanks to the efforts of the eugenists, most people are aware of the evils that threaten the marriage of defective individuals; but even of those who know a very small proportion are so bold as to inquire into the health of their proposed partners before committing themselves to matrimony; and it is also our opinion that the number of people who would allow their own imperfections, even though aware of them, to stand in the way of their desire in this direction must be very limited indeed.

IMPEDIMENTS TO MARRIAGE

Our knowledge of human nature does not warrant us to entertain much hope that the advice we proffer will be acted upon, but we feel it our duty, nevertheless, to do what we can to urge the young man contemplating matrimony to make sure, first of all, that he himself is in a fit state to enter the conjugal state, and secondly, to do what is possible in the circumstances to learn as much as he can concerning the health and family history of his intended partner.

Of diseased people who marry, it is safe to say that most of them suffer from one or other of the venereal diseases—not always through any fault of their own; but as we have already dealt with these diseases in special chapters, we will pass on to other diseases and afflictions, sufferers from which ought to be debarred from marriage, unless permitted to do so by medical authority.

Says Dr R. R. Rentoul: 'Why the clergy have not long ago refused to marry such persons as idiots, imbeciles, epileptics, feeble-minded, feeble-bodied, and 'recovered' insane, it is difficult to tell. But their very gross inaction is doing them immense harm in the public thought. It will not improve the physique of our nation, even though the papers state that the choir sang with great feeling, "The voice that breathed o'er Eden," that the decorations were carried out by Messrs

So-and-So, while "the presents were on a most lavish scale." All this does not mean healthy children, happy homes or useful citizens. The house jerry-builder is but a harmless person when compared with the jerry-builders of children.'

EPILEPSY

There is hardly any other disease so inimical to, and so destructive of, the physical and psychical relations between husband and wife, and consequently the married state altogether, as epilepsy. Epilepsy is a nervous disease in which the motor areas of the brain act spasmodically and spontaneously. The predisposing causes are to a large extent hereditary. Any marked nervous weakness in an individual may evince itself as epilepsy in his or her descendants. An attack is, physiologically speaking, characterised by explosions of nervous energy in motor areas in the brain, and may be occasioned by shock, a blow, or is more often induced by strong and prolonged mental excitement, wherefore the discharge of the accumulated nervous excitement in the form of a violent epileptic fit on the wedding night is by no means an unusual occurrence, with what effect on the possibly unsuspecting partner one may well imagine.

The epileptic taint expresses itself in many different ways; there is a recognised form in which consciousness is lost but for a short time, perhaps only for the

fraction of a second: the sufferer does not fall; if walking, he may continue to walk; if talking, he may resume the thread of conversation after an interval of silence and unconsciousness. Sometimes the outburst takes the form of mad fits of unreasoning rage or despair, which result in attempts at murder, at suicide, or other criminal acts. Epileptics are apt to transmit to their descendants either epilepsy or some other nervous or mental disease, or predisposition to such disease. Insanity, dipsomania, hysteria, crime and epilepsy are at times found in different children of the same family.

Of the predisposing causes there is no question that hereditary tendency is the most powerful one, and especially if the constitution of the family be scrofulous; it therefore follows, taking also into account the undoubted act that sexual excitement favours the occurrence of attacks in epileptic sufferers, that not only ought the contraction of marriage by epileptics to be opposed in every possible way—including legal prohibition—but that epileptics should by surgical operation be rendered asexual.

It may be mentioned that epilepsy, as well as other nervous diseases, are encouraged by the abuse of the sexual organs, particularly in the young. The subject is a painful one, but the direst consequences of this vice, with which the youngest children become imbued, is frequently brought before medical men; unaware of

the sin and evil consequences of their acts, the children ruin their constitutions at the most critical period of life, and lay the foundations of epilepsy and other nervous diseases, which are either quickly developed, or do not show themselves until late in life.

CONSUMPTION

Among the chronic diseases of the respiratory organs, tuberculosis of the lungs and of the larynx—pulmonary and laryngeal consumption—occupies a very prominent position from the standpoint of married life, because it is, owing to its infectious nature, a source of danger to the person living in matrimony with the sufferer, and also because it is frequently inherited by the offspring.

There can be no question that, from the errors in the contraction of marriage, much of the hereditary tendency to tuberculosis is developed, and especially when the union is between parties nearly related by blood; doubly so if the predisposition already exist in the family. Delicacy of either parent is very apt to entail consumptive tendencies upon the children; and the same follows if the parents are either too young, or if the father be advanced in life.

Up to the middle of last century the opinion was prevalent that tuberculosis was favourably influenced by pregnancy. The error was a serious one. It is certain that pregnancy and labour exercise an in-

jurious effect on the course of the disease, and that they are frequently the cause of its origin and relapse. Lactation, also, is regarded as an aggravating element in the course of a tuberculous illness, a great deal, of course, depending upon the stage of the disease.

Tuberculosis is not generally communicable, except to persons with hereditary tendency. In the close intimacy of married life the danger of infection of the healthy partner by the infected one is, of course, increased. The principal vehicle of infection is the sputum which contains the tubercle bacillus, and direct conveyance of the disease, by the act of kissing, for instance, is by no means impossible. So long as the genital organs are healthy, there is probably little danger of the transmission of the disease taking place through the medium of the seminal fluid or by the sexual act; but if these organs be tuberculously affected the case is quite otherwise.

Children of tuberculous parents, as we have already remarked, become themselves very often tuberculous. It is thought that they are seldom infected at conception or during pregnancy, as in the case of syphilis, small-pox, scarlet-fever, &c. because the number of people affected with congenital tuberculous processes of a manifest character is exceedingly small, and also because not in one single case has an inherited infection been traced to the paternal semen. It seems to be estab-

lished beyond doubt that the children of consumptives are not only very often of weakly constitution and ill-developed, but that they possess a specific inclination to the disease. This view is supported by the many known cases where all, or almost all, of the children of a family succumb more or less rapidly to tuberculosis, after having reached, apparently in perfect health, the second or third decade. Indeed, the whole physical constitution of descendants from tuberculous parents is very often so characteristic that one speaks of a 'tuberculous habit of body,' or diathesis, the distinguishing features of which are tall stature, long and flat thorax, stooping shoulders, flaccid muscles, generally ill-nourished state, a small heart, narrow blood-vessels, irritability of temper, limited nervous endurance, and an almost dirty-looking complexion.

The presence of tuberculosis in the husband is likely to prove a source of misfortune, not only from the moral and physical standpoints, but also from the economical one. It is well known that tuberculosis is very frequently accompanied by an almost characteristic morbid increase in the sexual desire. Thus more children result from the union than can be brought up in favourable circumstances. If the husband be not in a wealthy position he must deny himself more and more that superior nourishment and comfort which his condition demands, with the result that he gets worse.

In giving or refusing permission to marry to tuberculous persons, it is recommended that it is necessary to follow certain fixed principles with regard to the different classes of the disease, and also with regard to individual cases. It is, for instance, necessary as a rule to oppose the marriage of tuberculously affected people with far more energy than that of persons who are only hereditarily predisposed to tuberculosis; but, as Dr Kaininer has said, 'circumstances may occasionally arise where the advantages of marriage outweigh the disadvantages, where there is either no danger at all involved by marriage, or where, if present, such danger may be materially diminished by suitable prophylactic or therapeutic measures.'

A great deal depends, also, on the stage of the disease: where the expectoration is profuse, and contains bacilli, marriage must be condemned, as it would be highly dangerous to the other partner. In cured cases, the parties should wait for three years, at least, from the time of recovery, and even then should not marry until permission has been obtained from their medical adviser.

GENERAL RECOMMENDATIONS

There is every reason to believe that no one single person exists who is perfectly normal and entirely free from inherited predisposition to disease. But undue anxiety need not be felt on this score; for it must be borne in mind that, as in cer-

tain families morbid tendencies tend to increase — degenerative heredity — so in others they diminish. It is also possible to arrest by a suitable mode of life certain predispositions in certain individuals; and it must not be forgotten that a continued pairing with descendants of healthy families may result in annihilation of abnormal predispositions altogether, provided always that the degeneration of the germinal elements has not gone too far.

An eminent German doctor of medicine, Prof. M. Gruber, of Munich, has laid down the following general recommendations for those who contemplate matrimony: 'People afflicted with serious malformations, degenerates such as idiots, imbeciles, lunatics, epileptics, drunkards, habitual criminals, and chronic sufferers, such as tuberculous persons and syphilitics in the secondary stage, should absolutely be excluded from procreation. Equally unsuitable as procreators are individuals whose physical development is not complete, or whose sexual character is imperfectly marked. It is particularly necessary to dissuade from marriage women with poorly developed breasts and hips, women who menstruate irregularly, and women with ill-developed and imperfect pelves, as a consequence of rickets. In fact, only such persons should beget children as are perfectly healthy strong and well-nourished. Individuals who are either too young or too old are unsuitable for procreative purposes.

'It is essential to make inquiries into the history of the ascendants of persons about to marry. Important above everything in this connection is the physical constitution of the parents and of the brothers and sisters. But we must try to go as far back as possible, especially where the antecedents of the parents and of their brothers and sisters, as well as those of the brothers and sisters of the candidate for marriage, are not quite satisfactory. The further back the anomalies and morbid predispositions are demonstrable among the ascendants, the more frequently they have occurred among the members of any one generation, the more marked those abnormalities and signs of degeneration are, so the more the individual in question is himself or herself predisposed, and the probability greater that he or she will be equally affected or transmit that predisposition to the subsequent generation. If the particular abnormality or degenerative sign is serious, procreation must not take place under any circumstances, even if the individual in question may for the time being appear to be in perfect health. The more insignificant the hereditary susceptibility, both as regards the nature of the abnormality and also its degree, the more easy it will be to permit the marriage or procreation respectively, so long as the individual concerned may be regarded as normal. The decision will often be extraordinarily difficult and fraught with the most serious

responsibilities. In any case it will be necessary when giving the permission to the individual concerned to take great care that the other partner descends from a stock in which the same hereditary predisposition is not present, and that the married couple should in their mode of life and in the procreation of children take every precaution calculated to counteract the hereditary morbid proclivity.

The choice of husband or wife is, however, of importance not only from the point of view of the expected offspring, but also from that of the other partner. Particular attention must be directed to the danger of transmission of acute and chronic infectious diseases from husband to wife or *vice-versa*. In practice it is principally tuberculosis and venereal diseases—gonorrhoea and syphilis—which come into question. As regards the former, it is at least necessary to warn against the great risk of infection if it is not possible to prevent the marriage altogether. Persons who have suffered from syphilis or gonorrhoea must in no circumstances marry, or indulge in marital intercourse, until they are assured by their medical advisers that they are no longer contagious. No experienced practitioner will allow a syphilitic individual to marry and beget children before the expiration of at least three—or, better still, four—years from the commencement of the illness, and then only if the treatment has been a thorough one, and no symptoms

whatever have shown themselves for at least one year. As to gonorrhoea, there is hardly a medical man who does not know from his own observation that when this disease has once attacked the internal female organs it is practically incurable, and that the chronic condition in the male may continue for years with such slight manifestations that it is possible only by very frequent and most searching examinations to obtain conclusive proof of its disappearance. It is well known that such chronic and hardly recognisable gonorrhoeas are capable of producing in healthy women most virulent attacks of the disease.

'All the circumstances which preclude marriage, preclude as a matter of course the procreation of children if they arise after marriage has taken place.'

MARRIAGE BETWEEN BLOOD RELATIONS

There is a general opinion that marriages between blood relations, even when the contracting parties are presumably in perfect health, are often sterile, or, if not, the children born of such unions are usually endowed with insufficient vitality, malformed, predisposed to disease, or otherwise physically or mentally defective. The question has aroused much interest, and the result of exhaustive investigation, though inconclusive, would seem to indicate that consanguineous mar-

riage is not *per se* injurious to the offspring, but that the danger of procreation among blood relations lies in the hereditary transmissibility of certain predispositions to disease; and, generally speaking, it is advisable that blood relations should not marry, even though they appear to be absolutely free from any hereditary taint, because it must be borne in mind that there is always the possibility that two similar predispositions to disease, or degenerate tendencies, which on account of their slight intensity are not recognisable in the parents, may combine in the offspring and become so pronounced as to assume a definite abnormal character.

It should be mentioned in this connection that there is, undoubtedly, an unfavourable element in the marriage of two individuals who spring from two races too wide apart.

CHAPTER IX

A COMMON AND DANGEROUS COMPLAINT--FORMS OF HERNIA--WHAT TO DO IN EMERGENCY--WHY MAN IS MORE SUBJECT TO HERNIA THAN THE ANIMALS--CONCLUSION

ONE of the affections most common to men is that of Rupture or Hernia, which is the protrusion of some portion of the bowels, or of the viscera contained within the abdomen, through any part of the walls of that cavity. It is calculated that at least ten per cent of the population of this country are the subjects of hernia, and that it is much more common among men than among women: it is estimated that for every female there are four male sufferers.

A loop of bowel may be forced upward through the diaphragm — diaphragmatic hernia—or more often, and especially in children, it may be umbilical—at the navel—the bowel being naturally pushed through the abdominal wall at its weakest point. Among adult women a similar weak point in the abdominal wall exists at the femoral ring, through which the great

blood-vessels pass from the abdomen to the leg; and in both men and women the inguinal canal is frequently the seat of hernia.

The hernia may consist of bowel and omentum—or caul, a membrane more or less covered with fat which is spread over the intestines—or of omentum alone; but in either case as it is protruded it pushes in advance layers of the various tissues through which it passes, so that the external tumour consists of the hernia with certain coverings, the outermost of which is the skin.

FORMS OF HERNIA

Hernia is technically described, according to its condition, as reducible, irreducible, strangulated, incarcerated, inflamed, or possibly gangrenous. A reducible hernia is one which can, without operation, be pushed back by gentle manipulation into the abdominal cavity, through the channel along which it advanced. Irreducible herniae are often of long standing, and consequently have many adhesions which render operation inadvisable; but when a hernia suddenly becomes irreducible, operative interference is generally to be advocated on account of the danger of strangulation. A strangulated hernia is one which is so tightly nipped by surrounding tissues that the circulation of the blood in the part is arrested. This is a most serious condition; distressing symptoms very quickly ensue; all motion

of the bowels downwards is prevented, and their natural movements become inverted, their feculent contents passing upwards into the stomach, and are rejected by vomiting; at the same time there is severe pain, especially of a dragging character, from the back; there is thirst and depression of bodily powers. If the matter be not speedily rectified, either by the return of the bowels into the abdomen, or by operation—cutting the constricting band of tissue, it results in gangrene of the bowel and probably in death. A hernia may sometimes be reduced without relieving the strangulation, when the constricting band is returned with the hernia, and still nips it

An incarcerated hernia is one which is irreducible, and in which the loop of bowel has become obstructed by its contents.

We may repeat that there are three principal kinds of hernia: one occurring at the navel, and two, inguinal and femoral, in the groin. In inguinal hernia the swelling first appears above the fold of the groin, in femoral below it. The former is most common in males, the latter in females, although hernia, whether femoral or inguinal, is as has already been said, far more common in men than in women. Certain subjects are predisposed to hernia by weakness or malformation, either congenital or acquired. Lifting a heavy weight or other strong muscular exertion, such as violent coughing or straining at stool, may produce hernia.

Hernia usually—though not produces a swelling of varying size. It is not necessarily painful, except perhaps at the time of its production; it is elastic and somewhat doughy under the pressure of the fingers. The swelling is greatest when the sufferer stands upright, coughs or strains. In the case of many reducible herniae, the lump disappears altogether when the patient lies down, but returns directly he rises. Should the hernia become strangulated or incarcerated, temporary pain ensues, with constipation sooner or later, vomiting, loss of impulse in the swelling on coughing, increased size, and finally collapse. At a late stage the pain disappears, and it may be wrongly supposed that the condition is improved.

WHAT TO DO IN EMERGENCY

It is hardly necessary to mention that upon the very first symptoms of hernia showing themselves, medical assistance should at once be sought. We would warn the reader that every minute is precious. But if some time must elapse before medical aid can be secured we may venture to suggest that an attempt may be made to reduce the hernia by the manipulative treatment known as 'taxis'; the reader being again warned that to perform the process with any prospect of success requires both care and patience, and if done in an intelligent manner, it is a course which may safely be tried for a short time

by an unprofessional person; indeed, it is a process which sufferers from hernia often have to perform for themselves.

The first care must be to place the patient in a position most favourable for the return of the bowel, which position is the horizontal one: the sufferer being laid on his back, with the shoulders half raised, with thighs and knees flexed as much as possible in order to relax the abdominal walls, and the rings through which the hernia passes, and by which it is so tightly constricted. The neck of the hernia—that is, the portion of it next the opening from which the hernia protrudes—must now be compressed with gentle firmness by the fingers of the left hand, while the right hand kneads the protruded bowel back again through the opening. At first this process may seem to have little or no effect; but if the hernia is returnable at all in this way, and if the manipulation is properly carried out, after a time a perceptible diminution of the swelling will take place, which will continue until the hernia passes suddenly back into the abdomen, frequently with a gurgling sound. No force must be applied which is at all likely to injure the gut.

In the case of strangulated hernia, if medical aid is quickly procurable, the best course is to lay the sufferer in the horizontal position just described, and then leave the case alone until the arrival of the doctor, and not to handle the swelling as this may only place it in a more unfav-

ourable condition for the manipulation of the surgeon. But if surgical aid cannot be had for many hours to come, and only in such an event, the taxis may be tried, but must not be continued for more than twenty to thirty minutes. If the taxis does not succeed, it must be remembered that no good, but only harm, can result from repeated or prolonged attempts to reduce the hernia by this means.

There are other methods of treatment which may be resorted to by unprofessional persons; but we have known of so many disastrous results arising from the over-confidence of people who have attempted remedial measures suggested in text-books rather than summon a doctor that we own to some hesitation in giving information concerning these other methods of treatment. In doing so we can but trust in the reader's good sense not to hazard one moment's delay in procuring proper assistance, and to attempt to alleviate the condition only when too much time must elapse before the doctor can arrive; and warning the unprofessional person, at the same time, that unless the most extreme care and intelligence be exerted, irremediable damage may easily be done.

If the taxis be not successful, methods may be employed such as may assist the relaxation of the muscular parts round the hernia, or such as tend to diminish the size of the swelling. Opium, given so as to affect the system, will sometimes greatly facilitate the reduction of a hernia; for this

purpose twenty drops of laudanum, or one grain of solid opium, may be given to an adult, the former every hour, the latter every hour and a half, until three doses have been administered, due observation being made after the second dose that the patient does not seem to be too powerfully affected by the drug. Some surgeons put the patient into a warm bath for about half an hour, which generally produces faintness, when taxis is again resorted to, but it is a treatment which cannot be advised, as so many medical men object to it.

The application of cold will sometimes facilitate the return of a hernia by reducing the swelling. For this the best agent is snow, or pounded ice, put into an ice bag, and laid on the swelling. If snow and ice are unavailable, cold may be artificially produced by mingling five parts of diluted hydrochloric acid with eight parts of glauher salt in powder; or by mixing two parts of oil of vitriol with two parts of water, allowing the mixture to cool, and then mingling with five parts of glauher salt; or by mixing equal parts of muriate of ammonia and nitre in water. A piece of lint may be laid over the swelling and ether continually dropped upon it which will produce cold by evaporation. Sometimes the cold douche may be used with advantage. Under the continued application of cold for from half an hour to an hour and a half, the hernia may possibly pass without any manipulation at all. But if it still protrudes after prolonged applica-

tion of cold, manipulation for a short time may again be tried.

On no account must purgatives be administered; they may greatly increase the distress of the patient, and they afford very little chance of relief, besides which more intestine may be forced through the breach in the abdominal wall, and increase the difficulty of return. Neither should purgatives be given after a hernia has been reduced—the bowels very often acting of themselves soon after.

After the reduction of a hernia the patient should remain in bed until a truss has been provided. Every minute passed in the upright posture without the protection of a truss is one of peril. The selection of a truss should always be left to the judgment of the medical attendant; and if there be any unavoidable delay in the procuration of a suitable truss, a pad composed of cloth, wrapped round some firm material, and held in its place by a spica bandage, will be of some service during the confinement to bed.

WHY MAN IS MORE SUBJECT TO HERNIA THAN THE ANIMALS

In the evolution of man from a pronograde to an orthograde animal there has been a necessary extension of the human thigh, to bring it into line with the trunk, and a consequent considerable alteration in the structures of the groin.

We have seen how of the two kinds of

hernia in the groin, one, inguinal, which is more common in the male, occurs at a point where the testicles, just before birth, perforate the groin; the second, femoral, by another passage which is formed at the inner side of the great vessels of the thigh. The first is present in nearly all the mammals, but in them is well protected by suitable sphincter muscles, which is not the case in man. The second passage is peculiar to man, and is due to the manner in which the human thigh is attached to the pelvis. As Professor Arthur Keith has pointed out: 'Thus man's upright posture has been obtained at a sacrifice; the modification of the groin has weakened the abdominal wall at the root of the thigh, and made him liable to a malady which cripples the strength of many men.'

The tendency to hernia cannot be considered as an impediment to marriage, though the sufferer should only marry with the full consent of his medical adviser. The tendency can in no wise be regarded as hereditary, as it is due, as has been shown, to a structural peculiarity in man himself, and one and all are liable to suffer from it. But the man who has once been a subject of hernia must exercise every precaution, not so much that the danger of recurrence of hernia may interfere with his marital obligations, but rather from the economical standpoint.

Ruptured individuals must avoid any unnecessarily violent exertion, and should remember that horse-exercise is frequently

the cause of the malady. Perhaps the most usual cause is the straining of constipation, therefore it is imperative that all subjects of hernia should pay strict attention to the state of the bowels, always avoiding, however, the use of strong purgatives.

There are one or two supplementary points which may well be borne in mind. Hernia may come on suddenly, or gradually. The complaint is not *always* accompanied by swelling; sometimes even an experienced surgeon cannot detect the tumour, especially in stout people, and has to rely on general symptoms on which to base his treatment. The danger of a hernia is not in proportion to its size; when small and recent it is more liable to become strangulated. Herniae may occur in both groins of the same individual, in which case, of course, a double truss is required.

CONCLUSION

In a small book of this description the reflection which must cause most concern to the conscientious author is that so much has been left unsaid; in this case, the desire of the authors to instruct the reader so that he may have some knowledge, by aid of which he may avoid the many evils to be encountered in the various walks of life, has been frustrated by the exigencies of space. Even with regard to those matters touched upon in this book, we feel how inadequate for the intended purpose has been

the information given, that each of the more important subjects requires a larger volume than the present one for its proper exposition and discussion. We would, therefore, urge the reader, if we have succeeded in bringing him thus far with us, to study the four other books of this series, for each of them has been designed to serve as a supplement to all the others. We do not pretend that the information given in these volumes is in any way exhaustive; but we venture to express the hope that the knowledge acquired by their perusal may serve as an inducement and a stepping-stone to the study of some of those problems of life, comprehension of which would do much to avert the ills to which the human flesh is said to be heir.

All through the present book and its companions we have directed our appeal to the common-sense rather than to the religious sentiments of our readers; not from any desire to ignore the influence of the latter, but because it is our firm conviction that true moral and religious feeling can only be founded on knowledge based in its turn upon common-sense, and not upon superstition which has its source in ignorance.

Wherefore, we say to the Young Man at parting: Avoid anything and everything which your common-sense teaches you cannot react to your physical benefit, and you need never fear that your moral-well-being will suffer in consequence. The good things in life are to be enjoyed in

moderation and at discretion, and the enjoyment of them will help you to that true manhood which must be your goal, and which is no more to be attained by following the paths chosen by those who avoid the good things because some fools abuse them to their hurt, than it is to be reached by those roads which lead to the bottomless pit.

APPENDIX

By the Editor of 'Health and Strength'.

OF all the many sinister forces that militate against the physical betterment of the race, there are none more subtle, none more fatally potent than those besetting sins of boyhood and of early youth, that unless checked in time, must inevitably undermine the constitution and destroy the virility of those upon whom the future of the State, of the human race depends. It is strange indeed, that even in an age when the relationship between parents and their children is far more intimate than was formerly the case, when the father is the chum of his sons, there should still exist a reticence on the part of that father to warn that son against the ills that imperil unwary youth. Such reticence, to whatever cause it be attributable, whether to parental negligence, so called delicacy, or mere indifference, is criminal. Suppose that you were rushing headlong towards a precipice, in the dark, and you met a man who knew of its existence, and did not warn you when he might have done so, when later on you met your doom—destruction of life or limb—the reason why he failed to warn you would not matter very much to you. He might have delib-

erately held his peace, in which case he would have been a murderer; he might have treated the matter lightly or forgotten all about it, but whatever his motives, the consequences of his omission would be just the same.

The father who does not see to it that at the proper age his son is suitably instructed in the mysteries of life, has 'left undone those things which he ought to have done.'

Health and Strength, the national organ of Physical Fitness, seeking to combat the evil forces that make for national deterioration, secured the co-operation of men of light and leading (including the Rt. Hon. Lord Kinnaird and the Rev. F. B. Meyer) who contributed to that magazine articles, whose good results were so far-reaching that I feel convinced their reproduction in a book dedicated specially to the young men of our land, will serve a very useful purpose.

THE DISHONOUR OF MANHOOD

By the REV. F. B. MEYER, B.A.,

'So dear to Heaven is saintly Chastity
That, when a soul is found sincerely so,
A thousand liveried angels lackey her,
Driving far off each thing of sin and guilt.'
—'COMUS.'

THESE are the words of the immortal Milton, written in his young manhood. To him also we owe the following memorable words:—

'Every free and gentle spirit, without an oath, ought to be born a knight, not needing to expect the gilt spur, or the laying of a sword upon his shoulder, to stir him up to secure and protect the weakness of any attempted chastity . . . and since the body is for the Lord and the Lord for the body, I argued with myself that if unchastity in a woman be such a scandal and dishonour, then certainly in a man it must, though not commonly so thought, be much more defiling and dishonourable.'

UNCHASTITY OF SOUL

But, if one's experience and observation go for anything, such chastity of soul is not the rule, even among those who have

abstained from unlawful contact with the other sex. There is another taint, more insidious and deadly than either fornication or adultery, that resembles a deadly miasma, and shows no mercy. It is a lonely and solitary practice. It is rife in public-schools, and is sometimes practised by men old enough to be grandfathers. Its secret is sometimes acquired by a precocious lad, in his early teens, without instruction; and often it is taught to young boys by hoary scoundrels, for whom a horse-whipping would be too light a punishment.

Its presence may be detected in the nervous glance, the lustreless eye, the emaciated cheek, the loss of memory, the failure of energy, the morbid hypochondria that paralyses effort, and the decay of the higher faculties of the soul. Friends become anxious, prescribe rest, change of scene, foreign travel. It is supposed that the hours of work are too protracted, or the atmosphere of country house or office too vitiated. Medicines, tonics, recipes of exercise and breathing are tried in vain—what use can they serve, when the patient is undermining his constitution day by day?

Some years ago a Roman Catholic Priest, to whom the confessional had given wide and unusual opportunities of arriving at a just estimate of the extent of this secret vice, informed me that he believed that it was practised by not less than 70 per cent. of each young generation. But whatever the percentage, there is no doubt

of its wide prevalence. In the course of my life-work I have received hundreds of letters from young men, and men of all ages, asking for my help. But the sorrow of it has been, that in so many cases the letters have come from men of apparently blameless careers, Sunday-School teachers and Christian workers, who have avowed that they were sick of what seemed to be a double life. On the one hand, they were sure of their call to serve God, and their fellows; but on the other, they seemed bound by fetters from which they could not extricate themselves. They were driven by an inexorable tyrant to do his behests—behests which, from their souls, they loathed.

HEART-RENDING STORIES

The stories that these letters have unfolded have been heart-rending. How the practice was learnt; how often it has been practised—in some cases, once or twice or even oftener a day; how the victims have abhorred themselves, repented, started afresh, kept straight for a few days, only to roll again into the gutter; how they have resorted to quackeries of one kind and another in vain. Ah me! It has been a sad and bitter experience and yet I wouldn't have shirked or missed it for anything. Again and again words of brotherly advice and hope have inspired fresh resolves, and saved the poor slaves of this polluting habit from the asylum or the grave. No hand may draw aside the veil

which hides the awful end of vast numbers, of whom it may be truly said, that it had been good for them if they had never been born.

The Editor of this admirable paper has privileged me to read the letters of advice which he has sent to certain cases of urgent need; and I have been much interested and pleased with the sane, manly, and hopeful advice which he has given. The cold morning tub, the deep inhalation of the lungs, plenty of vigorous exercise, the strict prohibition of alcohol, strong coffee and too much meat, early to bed and early to rise, the occupation of the mind with elevating thoughts, the cultivation of a hobby, all these are admirable recipes, and within the reach of all.

The following conversation with the Chief Warder of a large gaol greatly interested me. I was asking him how men fared who were suddenly taken out of a vicious life and self-indulgence, and immured in a prison-cell. I suggested that if they could not gratify their passions in one way, they would in another. 'Oh,' he said, 'we have no trouble on that score. If we detect any symptoms of that kind, we put a man on harder work and reduce his food, and have no further trouble with it.' I don't wish it to be supposed that I think this practice arises simply and only from over-eating or insufficient exercise, but it cannot be doubted that, especially with the upper classes, vice is very largely due to their pampered appetites. Ezekiel

says that this was the iniquity of Sodom, pride, fulness of bread, and abundance of idleness.

But when all these recipes are being practised, there is still something more to be said and done; and I suppose it was the Editor's perception of this that led him to appeal to Ministers of Religion and others to append some additional advice to the young men who read these columns.

The fact is that the Rule of the Thoughts is very essential for those who desire to win the complete mastery of their bodies. He that ruleth his spirit, says the Wise Man, is better than he that taketh a city, whilst he that hath no rule over his own spirit is like a city broken down, without walls. As a man thinketh in his head, so is he. If a man can't control his thoughts, he can't control his body. Keep your heart with all diligence, for out of it are the issues of life.

PURITY OF THOUGHT, WORD AND DEED

A man may say, 'I can't help what I think.' This is a great mistake. It is quite possible to control one's thoughts, if one begins with the first suggestions of good or evil. We all know how impossible it is to stem a raging current, but a child's hand may divert in this direction or that the tiny rill as it breaks forth on the mountain side.

Is not this the ordinary experience? A man may be quietly reading; suddenly a slight suggestion is made to him: the memory of some photograph, picture, woman's face, or of a dirty story told in the smoking-room or by a companion, flits across his mind. Hardly a tip-toe is felt at first on the sands of thought. But that is the moment of peril, and on the response made to that slight suspicion of evil the whole course of the next few moments or hours depends.

If at once the will resolutely resists the suggestion, and slams the door in its face, the situation is saved; but to dally with it, even for a moment, spells defeat and shame. There are always these five steps: 1st, suggestion; 2nd, an impression on the mind; 3rd, either the persuasion or resistance of the will; 4th, if the former, the kindling of the imagination; 5th, sooner or later the act. We cannot help the first suggestion, nor the impression, however slight, made on the mind, but we can, and must, refuse to dwell on it. If we stamp on the tiny spark as soon as it falls, it will fail to explode the inflammable gas, of which there is too much, alas, in us all.

THE KNIGHT OF THE WHITE CROSS

The religious man, of course, finds further help when he is tempted, because the resolution of his will is strengthened by help from one higher than himself. He is

possessed and assisted by the incoming of a Divine spirit. He does not fight the bad thought in his own energy, but by turning to Him, who has Himself been tempted, and can succour the young Knight of the White Cross with His powerful help.

When once the temptation is resisted and the raw material of our virile manhood is retained, instead of being expended, it is so absorbed by the blood, and goes, as every trainer of young manhood knows, to the formation of new muscular and nervous tissue, especially of the grey matter of the brain. It means colour in the cheek, brightness in the eye, strength in bone and muscle, and gladness in the heart.

DANTE AND BEATRICE

A great lesson is taught by Dante in the Purgatorio. He brings us to the seventh and last circle where sensual sinners are cleansed from carnal wickedness in burning flame. Outside the flame stands an angel, singing in a voice sweeter than mortal, 'Blessed are the pure in heart,' and he tells Dante that he and every other soul who would enter heaven must pass through that purifying flame. For 'if any man's work shall be burned he shall suffer loss; but he himself shall be saved, yet so as by fire.' The mandate strikes the soul of Dante with a death-like horror, but his companion and teacher explains to him that the torment cannot end in death, and

that beyond he will see the glorified form of Beatrice, whom he had so ardently loved in his young life, but failed to win.

He enters the healing flame, guided by a sweet voice, which sang, 'Come ye blessed of my Father'; but 'when I was within,' he says, 'I would have flung myself into boiling glass to cool me, so immeasurable was the burning there.' At last he passed through it safely, and felt as though his soul could fly. Then they came on a fragrant soil, under the leaves of a forest resonant with the song of birds and tremulous with the soft breeze that played upon their foreheads. Amid May blossoms flowed a stream of purest crystal. Dante crossed the river, which bore the name of Lethe, because it obliterated the memory of his sin, and on the further side beheld a resplendent vision of Christ and the saints, and amid them a lady shedding flowers, her white veil crowned with olive. His blood was thrilled as he recognised Beatrice, the sweet lady of his love, with the light of Christ reflected in her eyes.

A GREAT PURPOSE AND A GREAT HOPE

All this may be taken as an allegory, and is true, not so much of the future as of the present. It is possible for every man to make a new start. Let us cherish a great purpose and a great hope. The dead past coil of habit may be snapped and broken

from this hour. With forgiveness glowing over the past, like a Lethe of Forgetfulness, with a resolute determination to turn from the first suggestion of evil, with a confident faith in Him who, in mortal flesh trod our world, let us pass through the cleansing fires.

We shall be surprised at the result. Nature will take on new beauties; the interests of life a new fascination; and instead of regarding woman from the lowest side of our nature, we shall discover our Beatrice, pure and true, scattering flowers, and with a divine glory in her eyes.

LORD KINNAIRD'S MESSAGE TO YOUNG MEN

ST. JOHN says in one of his epistles that he writes to young men because they are strong, and because they have overcome. He recognised that such young men were a valuable asset to the nation.

Well, most of the readers of this paper possess, I hope, though in varying degrees, the gifts of strength, vigour and energy. I want to urge our athletic and active friends to consider the value of these gifts to themselves and to the community. I should like every young man to add to his possession of strength the further quality, and become also an overcomer.

Athletic sports and pastimes are most desirable and ought to be encouraged amongst our young men, in order that they may keep physically fit, and to maintain health and vigour. So long as proper moderation is observed recreation and sport are necessary, but these things should be kept in due subordination and never be permitted to usurp a foremost place, or to become the main object in our lives.

Strength is truly a useful and helpful boon; in the battle of life, in the struggle

to make our way in the world and secure a good position, it is an undoubted advantage.

But it must ever be borne in mind that the full equipment of strength is not merely physical; the strength that overcomes is more than bone and muscle and steady nerve. There must also be a further and greater quality, strength of mind, strength of will, strength of character—the power and capacity not only to do bravely, but also to stand firm, to uphold the right in spite of ridicule or sneer.

It is this quality—mental strength—that makes the successful man, the useful man, the one who is looked up to and respected by his fellows.

May I therefore urge the young men with all their health and strength to strive after this perfection of manhood, the strong, capable body with the strong, capable mind; endowed with plenty of grit and firmness; eager to excel in some favourite sport and equally eager to attain to the best as citizens, to be skilled in their trade or calling and in all circumstances and surroundings to exercise a good and uplifting influence.

I am anxious to remind the readers of this paper of the highest ideal, of the noblest example of man at his best, and that is the unselfish and lofty life of One who should be our Example and Leader. We know that many of His wondrous

doings are beyond our feeble power. The strongest and best of us cannot give sight to the blind or raise the dead, but there is a great deal in His life and teaching that we may strive to follow, and so reach after a finer development of character and a higher manifestation of manly strength, mental, moral and physical. All may speak a word of cheer to the downcast, may use their strength to succour the weak.

'Do the work that's nearest,
Though it's dull at times,
Helping when you meet them
Lame dogs over stilts.'

It is one of the greatest privileges and one of the deepest and truest joys in life to aid in restoring the fallen, in giving new life and hope to the man who has failed and lost hope.

We cannot live alone in this world; each one is helping to pull down or to lift up those about him; and so we want our young men not only to be strong, but also to overcome—for themselves to overcome temptation, to live the straight, manly life, and in this way become fully equipped and ready to help others who are losing in the battle of life.

I appeal to young men to set before them and cherish the noble ambition that this world shall be all the better because they have passed through it.

KNOWLEDGE A YOUNG HUSBAND SHOULD HAVE

A most important treatise upon a most important subject, the only one of its kind written by a fully qualified British medical man. So much healthy advice, based upon so much sound reasoning, backed by expert knowledge of the matters dealt with, has probably never before been offered to the public. Neither Nature nor the marriage contract is to blame for ill-success in marriage, declare the authors; and they proceed to show us how we may all enjoy conjugal felicity by simple compliance with natural and social laws. The book contains valuable hints regarding many branches of domestic economy which should be of great assistance to married couples. The work is bound in a neat and serviceable cover, and well printed in good clear type.

2s. 6d. net. By post, 2s. 8d.

SEXUAL SCIENCE.

CONTENTS.

Chapter I.—The Physical Basis of Life—The Cells—Cell-Division—Body Building—Somatic Cells and Germ Cells—Reproduction and Growth—The Different Modes of Reproduction.

Chapter II.—Plants—Reproduction of Plants—Sexual Organs of Plants—Bi-Sexual and Uni-Sexual Flowers—Animals—Fishes—Oviparous Animals—The Structure of an Egg—Mammalia—Placental Development

Chapter III.—The productive Organs—The Uterus—The Appendages of the Uterus—The Ovary—The Ovum—The Vulva—The Mammary—The Bladder and Rectum—The Reproductive Organs of the Male.

Chapter IV.—Puberty—Menstruation—The Menstrual Flux—The Menstrual Period in Married Life—The Menstrual Period and Woman's Liability to Pregnancy.

Chapter V.—Foetal Development—Pregnancy—Signs of Pregnancy—Development of the Ovum—Germinal Layers—Foetal Dependencies—The Foetus

Chapter VI.—The Duration of Gestation—Parturition—Labour—Lactation.

2s. 6d. net. By Post, 2s. 8d.

Aids to Purity.

By Rev. JAMES MAXCHANT, F.R.S.C., Director of the National Social Purity Crusade.

Between Ourselves.

A series of letters to a Younger Brother on the things he should know concerning his body. By Rev. C. W. STEFFENS.

1s. net. By Post, 1s. 2d.

'HEALTH AND STRENGTH'

12 Burleigh Street, London, W.C.

Sex Knowledge Series

KNOWLEDGE A YOUNG WOMAN SHOULD HAVE

By **A. A. PHILIP, M.B. C.M.**

*(Late Medical Officer of Public Health, Northern Divisions
Scotland).*

And **H. R. MURRAY.**

CONTENTS

Chapter I.—Woman's Equality to Man—The Beginnings of Ethics—How Women came to be regarded as inferior Beings—The Effects of Celibacy on Women—Popular Antipathy to the 'Old Maid'—False Ideas of Delicacy

Chapter II.—The Origin of Life—The Doctrine 'Omne Vivum ex Vivo'—Chemical Action and Vital Action—The Cell—Multicellular Reproduction and Parthenogenesis—Sexual Reproduction—The Relation of Reproduction to growth.

Chapter III.—Sexual Generation of Plants—Cryptogams—The Construction of a Flower—Bi-Sexual and Uni-Sexual Flowers—Pollination and Fertilisation—Sexual Generation of Animals—The Propagation of Fishes—The Sexual Impulse—Oviparous Animals—The Structure of a Hen's Egg—The Propagation of Mammalia.

Chapter IV.—The Principal Organs of the Human Body—The Reproductive Organs of the Human Female—Additional details—The Breasts.

Chapter V.—Puberty—The Process of Menstruation—The Development of the Ovum—The Menstrual Discharge—Defective Menstruation.

Chapter VI.—Nutrition—The Process of Digestion—Composition of the Blood—The Circulation—Respiration.

Chapter VII.—The Corset and its Effects—Dyspepsia—Constipation—Anæmia—Chlorosis—Forms of Foods—Conclusion.

2s. 6d. net. by post 2s. 9d.

HEALTH AND STRENGTH'

12 Burleigh St., London, W.C.

KNOWLEDGE A YOUNG WIFE SHOULD HAVE

CONTENTS

Chapter I.—The Institution of Marriage—The Degradation of the Wife—The necessity of Recognising the Equality of the wife—The Endowment of Daughters.

Chapter II.—The Emotion of Love—The Real Significance of Sexual Relationship.

Chapter III.—Health in relation to Marriage—Advantages of the Health Certificate—The Curse of the Corset—Health obtained by Physical Culture.

Chapter IV.—The Wife in the Home—A Sensibly furnished Home—The Best Room—Ventilation—Simplicity and Comfort—Economy in Rent—A word about the Honeymoon.

Chapter V.—The Marital Relation—The Danger of Precipitancy on the part of the Husband—Frequency of Sexual Intercourse—Separate Beds for Husband and Wife.

Chapter VI.—The Female Organs of Generation and the Process of Menstruation—The Rationale of the Menses.

Chapter VII.—Impregnation, Conception and Gestation—Pregnancy not a Pathological Condition—Care of Health during Pregnancy—The Hygiene of the Mind during Pregnancy—The Process of Gestation.

Chapter VIII.—Parturition—The Selection of Doctor and Nurse—Labour—The Care of the Mother after the Birth.

Chapter IX.—Lactation—A Roman Author on Maternal Duty—Points to be observed during the Nursing period.

Chapter X.—The Child—The English Disease—Teething—Other Ailments.

Chapter XI.—Health and Family Limitation—The Science of Propagation—Abortion—How the Birth-Rate may be Regulated—Concluding Remarks.

2s. 6d. net. by post 2s. 9d.

'HEALTH AND STRENGTH'

12 Barleigh St., London, W.C.

